

## Vredenburg castle: medieval castle or modern fortress ?

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### Summary

In 1529 Rombout II Keldermans probably made three designs for the building of Vredenburg Castle at Utrecht. Other plans for castles made by him are those for Schoonhoven (1524), Ter Eem and Duurstede (probably 1529). With the help of these plans and on the basis of the excavated remains, the written sources, the measurements and the representations of Vredenburg Castle itself, the author tries to establish to what extent Rombout II Keldermans and his designs provide an adequate answer to the threat of heavy artillery, both offensively and defensively. The results, mainly gathered from the plans and buildings by Keldermans himself, are that the plans and their partial realisation are typical for the transitional period between medieval castle and modern artillery-fortress.

Keldermans' own evolution in this respect is demonstrated by the comparison of his plan for Schoonhoven Castle (1524) with the 1529 plans.

The assumption that Keldermans was influenced by Albrecht Dürer's ideas about fortification, partially rests on a misinterpretation by Daniel Speckle, who made a drawing of Vredenburg Castle after its demolition in 1577.

Further research, comparing the Keldermans fortifications with their contemporaries in Europe and assessing Keldermans' place in the history of the theory of fortification, still remains to be carried out.

## Résumé

En 1529, Rombout II Keldermans réalisa probablement trois plans pour la construction du château Vredenburg à Utrecht. Parmi les autres plans du château qu'il a conçus, notons ceux de Schoonhoven (1524), Ter Eem et Duurstede (probablement en 1529). A l'aide de ces plans et sur base des fouilles et des dimensions du Château Vredenburg, ainsi que des sources écrites et des représentations iconographiques de ce site, l'auteur tente d'établir dans quelle mesure Rombout II Keldermans et ses plans offraient une réponse adéquate - tant offensive que défensive - à la menace de l'artillerie lourde. La réponse - basée essentiellement sur les plans et les bâtiments de Keldermans lui-même - est que ces plans et leur réalisation partielle sont caractéristiques pour la phase de transition entre le château médiéval et la forteresse moderne.

L'évolution de Keldermans lui-même à cet égard est démontrée à l'aide de la comparaison de son plan pour Schoonhoven (1524) avec les plans de 1529.

La notion que Keldermans a été influencé par les idées d'Albrecht Dürer sur les fortifications repose en partie sur une interprétation erronée de Daniel Speckle, qui dessina le Château Vredenburg après sa démolition en 1577.

Il faudrait encore effectuer des recherches plus poussées, comparant les fortifications construites par Keldermans à celles de la même époque ailleurs en Europe et évaluant la place de Keldermans dans l'histoire de la théorie de la fortification.

## Building history

On October 24th, 1528, only four days after the city of Utrecht had fallen into the hands of the Emperor Charles V as part of the treaty by which he became temporal lord of the bishopric of Utrecht, Rombout II Keldermans, Master of the Works of the Emperor in the Netherlands (1), was already in Utrecht to find out where and how a fortress was to be built to subdue the unruly inhabitants (2). During the winter of 1528/1529 no progress was made (3) and soldiers remained billeted in the houses of the citizens. In March 1529 the Chaplains of the Order of St. John of Jerusalem (4) were more or less forced out of their Couvent and Hospital in the northern part of the city, close to St. Catherine's Gate, to make room for the castle (fig. 1). Early in the next month began the demolition of those buildings which could not be re-used in the castle. This work was followed immediately by the digging of the foundation-trenches for the three townward sides of the fortress. For the time being the old town wall was kept as the fourth wall. In August 1529 the three new walls, two corner-towers and the gatehouse, were well above ground (5) and at the end of that year the castle was defensible. In 1532 the moat was widened and in the years 1534 and 1535 the western range replaced the old town wall (6).

## The plan

From a remark of Laurens du Blioul, auditor of the central government at Brussels, in his report to Margaret of Savoy, Regent for Charles V in the Netherlands, it is clear that there must have been at least two plans for the design of Vredenburg (7). Whether there has been even a third plan remains uncertain, but a number of arguments seem to point to the existence of such a third version.

The plan mentioned in Du Blioul's letter and on which the castle was drawn as a rectangle, is apparently lost. The plan in the Utrecht State Archives (fig. 2) shows the northern wall of the castle evading the houses of the citizens, which was the reason why it didn't make a right angle with the eastern and western walls (8). However, there are a number of unexplained differences between the plan and the (remains of) the building itself (fig. 3) : the internal arrangements of the townward towers are mirrored on the plan, but not in reality. The reason is that no entrance to the lower corridor of the northeastern tower could be made on the right-hand side of the central entrance to the corridor at ground level, because of the buildings of the Convent that were left standing.

The gunports of the towers are not indicated on the plan, nor are the recesses which hid the mouths of those of the townward towers. The hexagonal gunrooms in the middle of the northern and eastern walls are not drawn on the plan, although they were made but never finished (9). All these differences between the plan and actual building may be explained by the wellknown habit of builders to change their plans during the building-process. However, the most compelling argument for the existence of a third plan from which the building was actually made, is perhaps the fact that the plan we still have, survived at all. The plan is kept in the Archives together with a number of other plans by Rombout II Keldermans (10) none of which were executed. The most telling example of those is the drawing for the construction of the roofs of the two fieldward towers of Vredenburg itself (fig. 4) : those roofs were never made (11). A plan or drawing used at a building-site rarely survives, and a finished building doesn't need a plan any longer.

#### The "modernity" of Vredenburg : the plan and the lower defences (fig. 3)

The fact that probably three plans have been made by Keldermans indicates that designing the castle was not an easy job. What was the final result : an up-to-date fortress, a medieval castle of the classical type, or something in between full of trial and error ?

The main outline of Vredenburg offers no modern features : it is a quadrangle with four corner-towers, a gatehouse and a backgate. The first plan, mentioned by Du Blioul, showed a rectangle (12), but the reason why that plan wasn't executed was political rather than fortificatorial (13). On the other hand the enormous thickness of the walls clearly was meant to be effective against modern heavy artillery. The walls between the towers consisted of about four meters of solid brickwork at the outside, nine meters of earthfilling and an inside revetting wall of one meter. In the northern and eastern walls supposedly "modern" features were planned, called "faussebraies" in Du Blioul's letter (14). The sad fate of these artillery-rooms, sagging and collapsing during building because of inequal foundations, has been described elsewhere (15). The question to be answered here is whether they ever would have been practical contraptions for military use. In that respect one wonders why Keldermans explicitly wrote in 1530 (on the building of the western range of Vredenburg in which the fausse-braies are drawn in detail on the plan of fig. 2) : "... and they (walls and towers) will be made without any fausse-braies in them" (16). Was that because of the catastrophe which befell the ones in the northern and eastern walls, or had he discovered that they were military useless ? Keldermans

doesn't provide the answer, so we have to look at the excavated remains.

It is clear that the fausse-braies (figs. 5, 6, 7, 8) were meant for (small) cannon : they both had a wide passage, which led without a sill into the central hexagonal rooms with three gunports each. The passage of the eastern fausse-braie had a sloping floor allowing to roll in the cannon from the outside; the northern one had a trapdoor, since there was no room to make a slope because of a building of the Convent that was left standing. The height of the hexagonal rooms was less than three meters (figs. 6 and 8). Gunsmoke must have been murderous when three (small) cannon were fired from it. As the fausse-braies probably were meant to have two stories (17), ventilation in them would have been minimal.

The two fausse-braies were to provide flanking fire to protect the walls and the towers of the castle. In that respect the central gunport would have been useless and even dangerous : a cannonball fired from that gunport would hit the brick revetting wall at the opposite side of the moat (fig. 3 : 22). Of course this problem never occurred in reality because the fausse-braies were never finished and because the revetting wall was built only in 1532. In many ways the same shortcomings are to be found in the lower parts of the interior of the townward towers (fig. 9). Here too, the room beneath the vaults was too low (less than three meters) to fire cannon of some size without the gunners being choked. Whether the smoke vents as drawn by Speckle (fig. 17) ever existed, remains - as we shall see - very doubtful. Moreover, before 1543, when the castle was modernized (18), the outlets of these vents would have been covered by roofs (fig. 15). Although the gunports were not drawn on the plan they have been found during excavation (19). Obviously they were built for large cannon (fig. 10). Even as late as 1547, i.e. four years after the modernization, an inventory mentions "iron serpentes" and "pieces of iron" in the lower vaulted rooms of the townward towers (20).

For the transport of cannon into and out of the lower vaults of the towers sloping corridors were made. In the northeastern tower the sloping part of the corridor was cobbled to prevent the cannon from going down at too great a speed (fig. 11). In the southeastern tower low steps were made in the same part of the corridor which must have made hauling up and down of cannon a cumbersome business.

The practicality of the gunports of the lower vaults, through which only horizontal fire could be given, must have been small after the year 1532. In that year the moat of

Vredenburg was considerably widened and revetted on its outside with a brick wall (fig. 3 : 22). Shot from ordnance standing in the lower rooms of the townward towers would hit that wall, causing it to crumble into the moat. As the revetting wall was undoubtedly made to keep an enemy at a distance from the castle and as the lower cannon were meant to do the same they seem to be mutually exclusive.

The plans of the townward towers have a particular shape, described by Speckle as "like a leaf of lime" (21). This shape was obviously chosen to eliminate dead angles : the direction of the gunports of the towers had been made to fire closely alongside the flanks of these towers. Here Keldermans introduced something quite "modern".

The low but wide mouths of the gunports could be an easy target for besiegers of the castle. Keldermans must have been aware of this problem, though probably only at a late stage : no solution figures on the plan that has been preserved (fig. 2). However, the remains of the towers found during excavations show the remarkably "modern" feature of retracted mouths of gunports (fig. 10). The recesses are not very deep (about one meter), but they seem to be quite adequate.

Evaluating the lower defences of the castle as they were at the end of 1532 one can say that there were some features which could be called up-to-date, viz. the shape of the townward towers with their retracted gunports and with their possibility of providing low flanking fire. On the other hand their effectiveness was undone by a too cramped internal arrangement and by the building of the revetting wall at the outside of the moat.

In 1534/1535 the western range of the castle was built, first under the direction of Laurens II Keldermans, who became Master of the Works of Vredenburg Castle after the death of his uncle Rombout II on December 15th, 1531 (22). Laurens died in 1534 and his successor was Marcelis Keldermans, whose exact position in the Keldermans family tree is not clear (23). The plan of Rombout II, amended by himself in his memorandum of 1530 by leaving out the *fausse-braies* (24) was faithfully executed by his successors. In fact, the building of the western range according to his plans was a posthumous victory for Rombout in a difference of opinion with Jean de Termonde, seigneur de Borngnival and Captain of Vredenburg Castle from 1529 till his death in 1536 (25). The main point of their quarrel according to Du Blioul's report from August 1529, was the question whether the defence of the western range of the castle should be effected by two large flanking towers jutting

out far into the city-moat (Rombout) or by means of a patched-up city-wall with an earthen revetment and a "faussebraie" in the moat (26).

Enormous rooms (28 x 10 m) of great height (4 m) made these newly built towers very fitting for heavy cannon (fig. 13). Even large smoke-vents were made into the vaults; the lower ones, however, aired into the upper rooms and those of the upper rooms were, as we will see, covered by a roof of sorts till 1543.

The "leaf of lime" shape of the townward towers was not repeated in the fieldward towers (fig. 14) : only the facing sides of the parts outside the wall were curved ; they could be considered as "half leaves". For the rest, straight lines, which are more vulnerable, are the rule. If they were made in that way to enable flanking fire from the townward towers, that use was undone by the walls connecting the fieldward towers of the castle with the town-wall and dividing the castle-moat from that of the city. Oddly enough the two fieldward towers do not have gunports with retracted mouths.

#### The upper defences.

The lower parts of Vredenburg presented a number of more or less "modern" features, which were, as we said, in part mutually exclusive. On the other hand the upper parts present some astonishingly old-fashioned components (fig. 15).

The covered wall-walk on all four walls with gunports clearly was out of date by the first quarter of the 16th century. Moreover there was a clumsy connection between the four parts of the wall via the four corner-towers, thus hampering the movement of ordnance. Everywhere on castles and on town walls of that time open gunplatforms without obstacles were made or designed, even by Keldermans himself (27).

But the utmost in antiquarianism were the roofs on the towers of Vredenburg. In the early thirties enormous pointed roofs covered with slate were set on top of the townward towers. They remained there till 1543 when they were torn down as part of the modernization of the castle during the last phases of the war with Gueldres (28). From the same accounts in which the demolition of those two roofs and of the covered wall-walk is mentioned, it appears that the fieldward towers at that time had temporary roofs made of wood and covered with thatch. The magnificent, but inflammable roofs of those towers as depicted on fig. 15 were never made (29).

One wonders what was on the minds of Rombout II Keldermans and his successors when they designed and made these

awkward constructions. Not only did they raise the castle to medieval heights and closed whatever smoke-vents there were, but they also created an incredible fire-hazard.

However, the fact that the Vredenburg towers did have two stories and that the castle had a high wall could be explained by the circumstance that the castle was situated amidst some tall houses on which artillery could be mounted ; a low fortress would be an easy target (30). Moreover, apart from a purely military function Vredenburg certainly also had to be psychologically intimidating. That may have been one of the reasons to build the impressive roofs on the towers.

After its modernization in 1543 Vredenburg had a continuous gunplatform bordered by a parapet with embrasures. Only the gatehouse kept its roof (fig. 16).

#### The gatehouse : Dürer and Speckle.

Vredenburg Castle had a main entrance in the middle of its southern side and a backgate in its western wall with a bridge across the city-moat. Of course the latter one was very important as means of escape and provisioning for a citadel in a unruly city, since the main entrance could be blocked easily from within the city.

Compared to the cornertowers the gatehouses were not very impressive, strong or sophisticated. Basically they were rectangular towers with dog-legged passages. On the Keldermans drawing, their fronts are somewhat out of line with the wall to enable flanking fire from the southern towers and to provide an oblique entrance. The representation of the main gatehouse on the engraving of fig. 15 seems to indicate a straight front, but that may be due to perspectival distortion. The same holds true for the bridge. The position of the unmistakable drawbridge-pit found during excavations confirms the existence of an oblique front-wall of the gatehouse and that in turn makes a dog-legged bridge unavoidable. The design of the backgate has not been followed when the gate was built in 1534/1535 : no extension into the city-moat, no oblique entrance or doglegged bridge, no rooms at ground level, but only a dog-legged passage and two winding stairs to reach the wall-walk. Instead of a real backgate it had become only an outsized postern.

The main gatehouse seems to have been one of the features which gave reason to call the castle "modern" and - more specifically - to point to Albrecht Dürer as a source of inspiration (31). The origin of this notion is perhaps to be found in the drawing that Daniel Speckle made of Vredenburg (fig. 17). This drawing should be viewed with the greatest



suspicion. Apart from the fact that Speckle was not a good and not even an accurate draughtsman (32), he himself indicates on his drawing that he saw but little of the castle. Through the southern wall he drew a line close to the southwestern tower at which he wrote "also weyt abgebrochen" (demolished up to here). He did the same at the northern wall indicating "also weyt gegen der statt zu ist er geschleifft" (thus far to the city it has been torn down). This means that the only part of the castle he saw with his own eyes was the western range, which he depicts rather faithfully. The rest he must have reconstructed on paper from the ruins, from hearsay or perhaps from more or less primitive representations of the castle (fig. 16). It seems unlikely that he ever saw the painting of about 1540 after which the engraving of fig. 15 was made. Since Speckle visited Utrecht at the end of the year 1577 (33) his drawing gives an indication as to the speed with which the Utrecht citizens demolished the hated citadel after its surrender by the Spanish garrison on February 11th, 1577, after a siege of nearly two months (34).

As Speckle has not seen the gatehouse for himself he draws it as he thinks it to have been, perhaps aided by the anonymous engraving of fig. 16, which shows not only some curved lines at the entrance-tower, but also the oblique front-wall of the gatehouse. However, Speckle makes the gatehouse, from whatever sources he had, into a typical Dürer "Bastei" : round, squat and full of gunports (35). From excavations, written sources (building accounts and inventories) and from (other) drawings, no such building can be reconstructed. Therefore Speckle must be dismissed as a reliable source of information concerning the question of the "modernity" of Vredenburg Castle, at least with regard to the main gatehouse.

Nevertheless, it is interesting to know what Speckle wrote about Vredenburg and about other fortifications from the time of Charles V (36). After discussing the plans for the fortifications of Rome after the Sacco di Roma, which ranged from a small-scale defence of the Castello Hadriani to a new town wall for the whole of Rome, Speckle states that this example is a good starting-point to consider "...that a fortification be neither too small nor too vast, because there is more to it than buildings only, e.g. ammunition, provision, garrison and money, which should be available not only for a short period, but also for a long time". Then he goes on, saying that "... when small forts are being built, they are mostly found in large cities ..." and "... that Charles V had ordered a number of them to be built, most of them in the form of a quadrangle". As examples of those he mentions Ghent (against the unruly inhabitants), the same at Utrecht (against the pro-Gueldres party !) and La Goletta in Tunis (later changed  
by

Philip II). He then evaluates these fortresses as follows : "These quadrangular fortresses built by Charles V were held in high esteem in their time, but they have not been devised as well as in our times. And (he adds) I have seen that myself". A well-balanced judgement from an expert, whose book appeared exactly sixty years after the first brick of Vredenburg Castle was laid.

#### Other Keldermans fortifications.

The answer to the question "How modern was Vredenburg Castle ?" is, of course, closely related to the question "How modern was Rombout II Keldermans ? "His ecclesiastical and civilian buildings were made in a very late-Gothic manner, called "Keldermans Style" (37). There is nothing in them that points to Renaissance influence (38). Nevertheless Keldermans' buildings were favourably commented upon by Albrecht Dürer, although he doesn't mention the name of the architect (39).

Of Rombout's fortifications next to nothing remains and they formed only a small part of his works. However, a number of his plans for fortifications have come to us, but - as has been said before - those plans have a major drawback in that the buildings designed have not or only partly been executed.

The oldest known plan is that for a new castle at Schoonhoven (fig. 18) of which only one tower was ever finished (40). The plan is shockingly old-fashioned and by its form alone could easily be dated at least a century earlier. Luckily it is signed and dated to 1524, July 11th. Compared to the Schoonhoven plan the one for Vredenburg Castle is much more advanced. Together with the plan and estimates for Vredenburg a number of other drawings and estimates are kept in the Utrecht State Archives (41). The plans have been published by Janssen (42), who tentatively attributes them to Rombout II Keldermans, although the accompanying estimates date from the summer of 1532, half a year after Rombout's death (43).

The designs for the fortifications for the town of Rhenen do not show any striking modernities. The drawing of the Tolsteeg city-gates of Utrecht only seems to be a plan of the existing medieval situation (44).

The plan for the extension of the defences of the castle of Wijk bij Duurstede (fig. 19) shows one hexagonal bastion, which in fact is no more than a square tower with an angle chopped off. The entrance to this bastion is in the middle of the outer side via a straight bridge, which doesn't seem

to be very sensible; nor is there any improvement in the possibilities for flanking fire (45). Further study of the estimates is still necessary to allow the evaluation of the plan for Duurstede.

For the castle of Ter Eem this evaluation has been done by Janssen (46). In the case of Ter Eem, as with Duurstede, an already existing medieval castle is fortified by an external line of defences (fig. 20). On the whole the plan for Ter Eem seems to be the most "advanced" one of Kelderman's creations. Its corner-bastions (NE and SW) are only one story high. In the estimate it is stated explicitly that these bastions may not be higher than the (already existing) earthen ramparts. Ramparts and bastions will be crowned by a parapet so that a continuous gunplatform is created. The description in the estimate "... eenen groote plattefoerme ... om al lant te beschieten" boils down to "artillery-platform". Unluckily the oddly shaped "ears" to protect the gunports are not mentioned in the estimate. Their design doesn't seem to be very efficient, but the idea behind it is clear.

In contrast the tiny projections on the other two corners are named : they are called "mezekooien" or "monetten" (47), features which are not unknown in early 16th-century fortifications (48). They were meant to give low flanking fire in the moat. However, the "monetten" of Ter Eem are of a miniature size of about 6 x 3 m. In an inventory of the castle two stonethrowing cannon are mentioned in each of them (49) !

As Janssen showed, the planned masonry fortifications of Ter Eem were never made the way they were designed. The two "monetten" were already there, but they are located at the corners where the low bastions were to have been built. According to the estimate the "monetten" had to be torn down and to be rebuilt at the corners where they figure on the drawing (50). Since the plan seems to be older than the estimate (51), shape and size of the existing "monetten" should correspond to those on the drawing. That leaves us with small and probably slightly built (52) bastions in which the firing of two cannon must have suffocated the gunners.

Comparing the plan for Ter Eem to that for Vredenburg the first seems to be more "modern", especially because of its low gun-platforms. But, as has been said before, Vredenburg had to be higher because of the surrounding tall houses. The protection of the mouths of the gunports is very markedly thought of at Ter Eem, but more efficiently executed - though not drawn - at Vredenburg. The designs of both Vredenburg and Ter Eem suffer from cramped artillery-rooms, except for the western towers of Vredenburg.

One other castle has to be mentioned here because its outer works are sometimes ascribed to Rombout II Keldermans. The castle of Montfort (53) in the present province of Limburg, has been founded in the 13th century ; it has a magnificent "tour à bec". The outer works consist of two large and two small round bastions with gunplatforms behind a parapet and (vaulted) gunrooms beneath them. Low flanking fire was provided from (rectangular) gunports (fig. 21).

The only link between Montfort and Keldermans is one payment made to Rombout II for visiting the castles of Montfort and of Valkenburg (in the southern part of Limburg) from November 22nd to December 15th, 1529 (54). Montfort at that time was in imperial hands. It was one of the key-fortresses in the struggle with Gueldres (55). Whether the other works, of which nothing remains above ground, were of a design by Keldermans cannot be proven. The most likely period for their construction is between 1505 (when the castle was captured by the Habsburgs) and 1543 (when the final surrender of Gueldres took place).

### Conclusion.

The question whether Rombout II Keldermans was a "modern" military engineer has to be answered in the negative. There are too many inconsistencies in his defensive and offensive conceptions. On the other hand there is a remarkable evolution in his work between 1524 and 1529 from a very classical castle (Schoonhoven) to artillery-forts (Vredenburg, Ter Eem). Not surprisingly that places him in the group of architects that by way of trial and error sought to find answers to the ever growing threat of better artillery.

In this article this conclusion is reached by the study of Keldermans works only. It should be kept in mind that comparison with contemporary fortifications in the Netherlands and elsewhere in Europe has not yet been undertaken. Keldermans place in the history of the theory of fortification before the invention of the pentagonal bastion in Italy is even less ascertained. Both fields of study offer good opportunities for archaeologists and (military and art) historians.

(1) RAU, AFI 54, 76r : "Mr. Rombout, in zijn leven mr. werckman van de edifitiën keij. mat. in den landen herwaarts over". See also Squilbeck 1953, 115.

(2) ARA, NDR 1029/1, 268 : postscript to a letter of 24-10-1528 from Antoine de Lalaing, count of Hoogstraten and governor-general of Holland and Utrecht, to Floris van Egmond, count of Buren : "Quant à faire la forteresse en ceste ville (=Utrecht) la conclusion n'en est encores prinse. j'ay cy Terremonde (=Jean de Termonde, seigneur de Borngnival, lieutenant of Utrecht) maistre Rombout et autres pour la deviser ensamble le lieu y plus convenable. Dez que la conclusion en sera prinse que la loy sera faicte et mis ordre au police dela ville je vous en avertiray".

(3) One of the reasons was the problem to get the money necessary for such a costly building. Even the making of an earth-and-timber fortification was considered : ARAB, RSA 1524, 200r/201v : letter from Gerrit van Assendelft, Joost Sasbout and Vincent Cornelisz, officers of the Emperor, to the count of Hoogstraten, dated 29-1-1529: "attendu que les deniers sont si chiers à recouvrer on pourroit prendre lieu moins coustable, ou pour le premier faire ung fort de terre et bois...". Even in February 1529 no progress had been made, so that the count of Hoogstraten even doubted whether a fortification would be built at all in the next two years : ARA, ACB 558, letter from the count of Hoogstraten to Du Sart, auditor, and Joost Sasbout, councillor, dated 16-2-1529 : "... vous savez quelles apprestes nous avons, tant de deniers que d'estouffes pour mettre en train ladicte fortification et quel espoir il y a au recouvrement desdis deniers en sorte qu'il n'est apparant y donner ordre et l'avoir à deffence qu'il ne passe encoires quasi l'espace de deux ans...". This defeatist attitude worried the councillors : ARA, ACB 559 : letter from Joost Sasbout, Vincent Cornelisz and Cornelis Anthonisz, councillors, to Du Sart, auditor, dated 22-2-1529 : "... naedet mijn heere van Hoochstraten ons scrijft zoe en heeft hij nijet veel moets totten starckte t'Vuytrecht binnen twe jaeren te maecken. ghij weet die periculen dairin gelegen zoe dat men die costen van aldair zoe veel knechten te houden nijet vervallen en mach, ende hoe langer vertoeft hoe min apparentie wesen sal van starckte aldair te maken ...". They feared the costs of a longer period of billeting troops in Utrecht and they thought that a long delay would put off the building of a fort completely.

(4) In the Utrecht Convent, though the headquarters of the "Knights of St. John" in the northern Netherlands (the Bailiwick of Utrecht), there were no knights, but chaplains, whose task it was to run a hospital (Van Winter, 1986).

(5) ARA, ACB 713 : report from Laurens Du Blioul, auditor, to Margaret of Savoy, regent for Charles V in Netherlands, August 1529, : "L'audiencier a trouvé que les machons besoignassent à faire les secondes vaussures de la porte, des murailles et faussebrayes, aussi au fondement du moynet et demy rond vers la porte sainte Katherine (= the northwestern corner tower up to the old townwall)... les secondes vaussures de la porte, tours et faussebrayes au dit de maistre Rombault pourront estre achevees le XXe du present mois".

(6) For more details, see Hoekstra 1982, 153-157.

(7) ARA, ACB 713 (see note 5) : "Oudit patron se tienne differend au premier patron envoyé à madame (= Margaret of Savoy) en ce que le coste du fort à l'endroit de la rue sainte Katherine jusques la porte (= the northern side of the castle) n'est quarré".

(8) ARA, ACB 713 (see note 5) : "Et se pert la quarré tirant vers ladicte porte pourceque en observant la quarrure il eust convenu largement abatre du logiz de dedens le fort, dont en l'avenir l'on eust eu faulte, et oudit caz y eust eu peu place audit endroit pour y faire bonne douve que toutesvoyaes y est bien necessaire".

(9) For more details, see Hoekstra 1982, 151-152.

(10) Janssen, 1981, 305-306. See also the plan of the castle of Schoonhoven of which only one tower has been built.

(11) For more details, see Hoekstra 1982, 156-157, and "the upper defences" in this article.

(12) See note 7.

(13) See note 8.

(14) See note 5.

(15) See note 9.

(16) RAU, AFI 46, 4v/5v : declaration by Rombout II Keldermans about those parts of Vredenburg that still had to be built, dated 6-3-1530, but incorporated in the estimates of 28-6-1532 : "Ende noch gemaect sal woerden zonder eenijge fouzo- breijen daerinne te maecken ...".

(17) See note 5.

(18) See note 11.

(19) Hoekstra 1982, 150.

(20) ARA, GRR 2e pak M-Z, 1547 : inventory of Vredenburg anno 1547, 3v : "... in't onderste welfsel van denselven (= Vlaamse) toorn : twee ijseren serpentijnen met haer cameren". 4r : "in't onderste welfsel van denselven (= Hollandse) toorn : van de vier ijseren stucken mair twee". In 1545 (ARA, GRR 2e pak M-Z, 1545, 4r) in the lower part of the Hollandse tower : four iron pieces on chassis ("vier ijseren stucken geaffusteert") which seems somewhat overdone with only two cannonloops available.

(21) Speckle 1589, 16 : "Die Wehren sind wie ein Lindenblatt".

(22) Not 1530 as said in Hoekstra 1982, 154.

(23) Hoekstra, 1981, 170-171.

(24) See note 16.

(25) RAU, AFI 86, in which some financial irregularities of the late Borngnival are straightened out.

(26) Which, of course, is the normal place for a fausse-braie.

ARA, ACB 713 (see note 5) :

"Ledit audiencier (Du Blioul) a bien entendu ... que le seigneur de Borngnival, lieutenant, et maistre Rombault Kelderman, maistre des oeuvres, ayant esté en diversité d'opinions touchant de faire deux tours, qu'ilz dyent demy rondz ou moyentz, aux deux coingz du fort aux endroiz ausquels ledit fort se joint à la muraille dela cité. En ce assavoir que ledit maistre Rombault, lequel avoit ordonné lesdis moynetz et soustenoit que à la seureté du fort ilz feussent requiz et necessaires et que d'ung train et quant à quant les autres tours dudit fort ilz se feissent, disant d'avantaige que l'ouvraige en seroit plus beau et meilleur.

Et ledit seigneur de Borngnival, querant pour la seureté de l'empereur et dela sienne propre, aussi pour éviter despense, avancier la cloture du fort, disoit que mieulx vouldroit clorre le fort et differer desdis demy rontz au plaisir de l'empereur et madame ... Et neantmoins sont lesdis demy ronds esté encomencyez et bien avanciez sievant l'opinion dudit maistre Rombault". They also disagree on how to finish these towers at the outside of the castle : "... que ledit maistre Rombault entent que ces deux demy rontz cy apres se seront rontz en les faisant passer parmy la muraille dela cité et les bouter hors icelle muraille sur la douve et le fossé dela cité ... disant ... qu'ilz pourront servir de deffendre ladicte muraille vers les champs si avant que elle comprendroit entre iceulx demy rontz, et d'avantaige que l'ung pourra deffendre jusques à la porte de

sainte Katherine, et l'autre jusques à la tour luy voisine hors ladicte muraille, comme ilz deffenderont pardessus la cité.

Et en ce que aultre que ledit maistre Rombault est d'oppinion que l'on doye abattre la vielle muraille dela cité qui clot le fort contre les champs ... et qu'on faice nouvelle muraille.

Et ledit lieutenant, pour eviter despense comme dessus, est d'oppinion qu'il ne soit besoing que les demy rondz, pour def fendre hors la muraille dela cité, la passent. Ne que ladicte muraille se abate, et dit que icelle muraille se pourroit rempyeter et fortiffier pardedens à l'endroit du fort d'ung petit mur et de terres, et que d'artillerye etc. se pourroit mettre es bafoes (= "cheecks") et costez dela porte de sainte Katherine, qui se renforceroient, et d'une faussebraye hors de ladicte muraille, se pourroit faire souffisante deffense vers les champs lelong d'icelle muraille ...".

Nevertheless Du Blioul thinks that both gentlemen will come to an agreement on these matters.

(27) Janssen, 1981, 307-308 on Ter Eem. See also p in this article.

(28) RAU, AFI 23, 61r and 73r. See also note 11.

(29) See note 11.

(30) This problem also crops up in the discussion between Borngnival and Keldermans with regard to St. Katherine's Gate, which should be lowered. ARA, ACB 713 (see note 5) : "Et tous deux sont d'oppinion que du fort qui se fait l'on entre à ladicte porte de sainte Katherine et que icelle porte, qui est haulte pour regarder dedens le fort, s'abasse jusques à la première vaulssure, mais encoires diffent ilz dela manière de l'entree dudit fort en icelle porte et du temps que elle s'abasseroit". A passage from the castle into St. Katherine's Gate was never made, but the gate itself was lowered (Van der Vlerk, 1983, 69-73).

(31) Vermeulen, 1931, II, 427, with explicit reference to the gate-house as drawn by Speckle.

(32) Muller, 1911, 175-178 thinks Speckle's drawing accurate, which it is not. See Will, 1958, 108 : "Mais quand il s'agit de représenter quoique ce soit en perspective, n'y est plus du tout (correct). Ses dessins font songer irrésistiblement à des dessins d'enfant : on sent que l'ingénieur, avec une maladresse touchante, a dépensé dessus beaucoup d'efforts et de couleurs". After these scathing remarks, Will gives a number of examples to prove her point.



(33) Kabza, 1911a, 27-31. Kabza, 1911b, 170-171. Muller, 1911, 178.

(34) Van Bolhuis, 1838, 153-176 and 185-201. The siege lasted from December 21st, 1576 till February 11th, 1577. Popular belief has it that a band of women completely demolished the castle after its surrender (Riphaagen, 1977, 91-98). Though they have wrought havoc, the demolition proper took a more orderly course : the Estates of Utrecht sold parts of the castle to those who wanted to carry out the demolition to get the building materials. Accounts of the expenses and revenues thereof have survived (RAU, ASU 156, August 1577).

(35) Dürer, 1527, passim.

(36) Speckle, 1589, 16 : "Solches Exempel nun gibt gut anleitung/das man achtung thun/und ein Vestung wol berathschlagen soll/das sie nicht zu klein noch zu gross werde/dann noch viel darzu gehört/on das bawen/als Munition/Proviant/Volck und Gelt/und das darzu nit auff ein zeitlang/sonder stets damit es erhalten möge werden.

Derhalben ich widerumb auff mein vorige meynung komme/wann kleine Vestungen gebawen werden/so bawet man sie mehrertheils in grossen Stätten/und hat Keyser Carle V. solche erstlichen lassen zurichten/und vast alle in die viereck gebawen. Als das zu Gent wider die ungehorsame Bürger/da er ihn die Stattmauer hernider warff/damit er sie im zaun behielte/desgleichen zu Utricht/wider die Geldrischen/ auch in Affrica/die Goleta/als er Thunis gewane/doch seind sie alle in die 4 eck gebawen/wiewol König Philippus auss Hispania die Goleta weiters umbfangen/und besser gebawen hat. Diese viereckechte Vestung nun so Keyser Carle hat lassen bawen/sind zur selbigen zeit hoch geacht gewesen/haben aber kein recht bedencken gehabt/wie bei usern zeiten/und wie ich sie gesehen/sind sie auff solche manier gebawet. Die Wehren sind wie ein Lindenblatt/von den Streichen rund in ein Bogen gangen/und vornen zugesptitzt/innwendig gantz gewölbt/oben mit 3 Rauchlöchern/demnache ist die Futermauer auch gangen wie hie vorn verzeichnet ist". Ghent, of course, was built in 1540, long after Rombout's death. It had pentagonal bastions. Fris, 1922, 13 Sqq.

(37) Roggen and Withof, 1944, 151-152.

(38) Terwen s.a., 20-21 says, without giving a source, that Rombout visited Rome.

(39) Goris and Marlier (eds.), 1970, 60 : Antwerp, Our Lady's : "Die kirch hat ... köstlich steinweg und sonderlich einen hübschen thurn" ; 80 : Bergen op Zoom, Markiezenhof : "Ich habe gesehen das von Bergen hauss, ist fast gross und schön geba-

wet" ; 82 : Middelburg, townhall : "... hat ein überschön rathauss mit einen köstlichen thurn, do ist an allen dingen viel kunst an".

(40) Visser, 1964, 109-111.

(41) RAU, AFI 46. The drawings have also been filed separately under TA 2088 a-f.

(42) Janssen, 1981.

(43) Janssen, 1981, 306, supposes that the drawings have been made in 1529 or shortly afterwards and that Vredenburg was built immediately. The others could wait till later, i.e. till 1532, including the widening of the moat and the building of the western range of Vredenburg. Estimates of the latter ones are among the papers, but also the declaration by Rombout II Keldermans from 1530 referred to in note 16. The latter fact makes Janssen's supposition that the estimates have been written to already existing plans, even more likely. For Vredenburg itself that is certainly the case as has been demonstrated in this article.

(44) Van der Vlerk, 1983, 61-66, esp. figs. 12 and 13.

(45) Janssen, 1981, 307.

(46) Janssen, 1981.

(47) Viollet-le-Duc, 1854-1969, IX, 115, n.3 : "On donnait le nom de moineau à un petit ouvrage saillant bas ; placé au fond du fossé, le défendant et pouvant contenir des arquebusiers ou même des arbalétriers". It is doubtful whether "moineaux" are always small : the "moynetz" which figure in the discussion between Borngnival and Keldermans (see note 26) were huge structures of two stories.

(48) E.g. Munot near Schaffhausen (Find, 1970, 298-299) internal diameter over 5 m, maximum height over 10 m and Franchimont (Hoffsummer, 1982, 58-66) internal diameter about 15 m, maximum height about 6 m.

(49) Janssen, 1981, 311 and note 50.

(50) RAU, AFI 46 : "Item die monetten die nou op die hoocken lijggen daer die poerte ende toeren comen sal, die sal men maken op die ander hoocken in den wal als sij nou gemaect sijn, ende sal wel coosten af te brecken ende weeder te maecken, omtrent Ic LX f".

(51) See note 41.

(52) One even wonders whether at such a relatively low price (f 160) they could have been made of brick. The costs of building the gatehouse was estimated at f 4500, those of the other bastion at f 2500 (RAU, AFI 46). So one "monet" was more than thirty times cheaper than a single bastion.

(53) Renaud, 1961, kol. 127-131 and plates 9 and 10. Simonis, 1961, 140-144.

(54) Simonis, 1961, 142-144, citing ARAB, RSA 873, 254r : "A maistre Rombault van Mansdale, dit Keldermans, maistre des ouvrages dudit Seigneur Empereur, pour vacances faictes à Montfort et Faulquemont du XXI<sup>e</sup>le de novembre XXIX au XV decembres ensuivant XL f".

(55) Simonis, 1961, 140-142.

## Abbreviations.

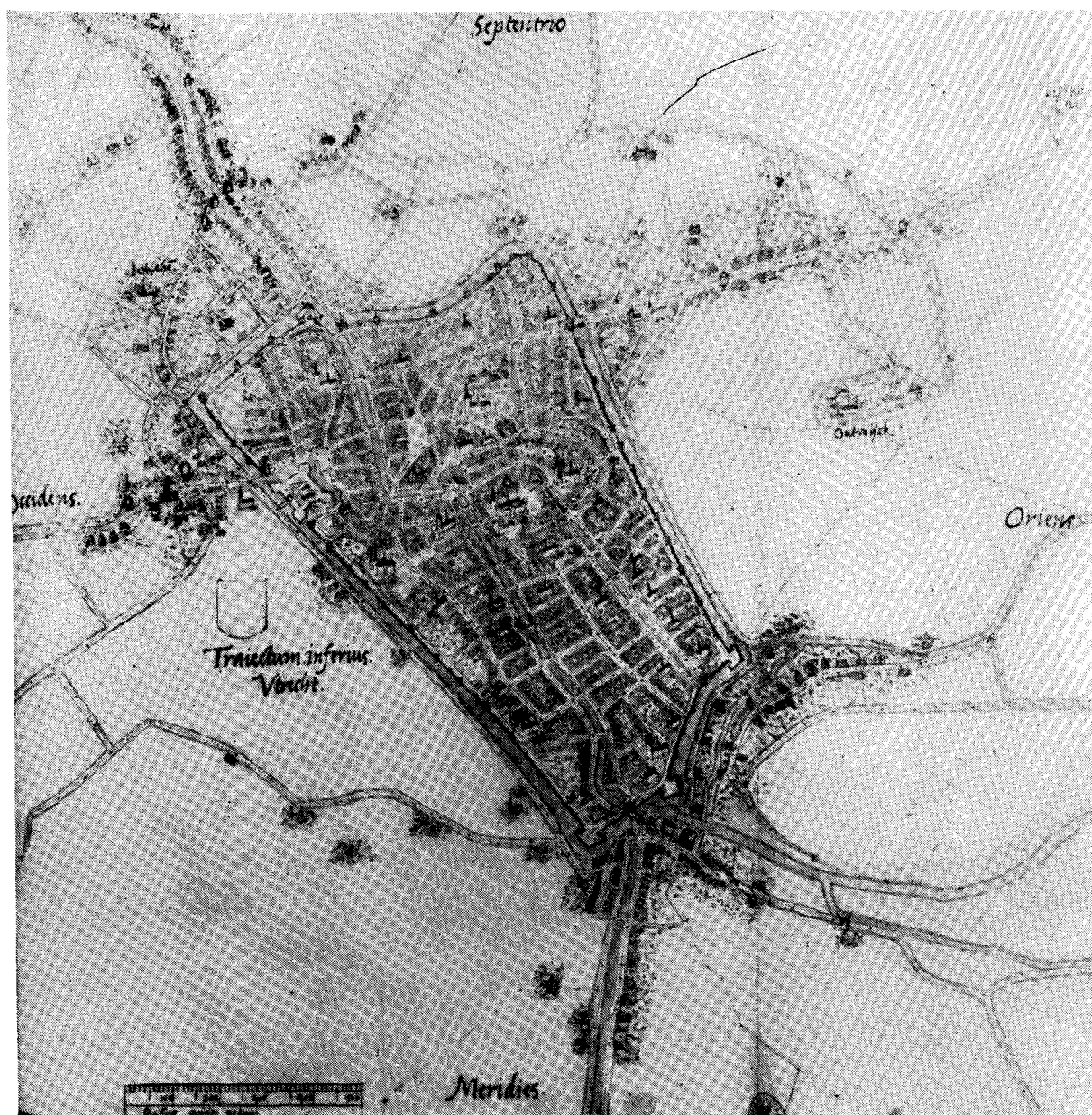
ACB	Ambtenaren van het Centraal Bestuur.
AFI	Archief Financiële Instellingen.
ARA	Algemeen Rijksarchief 's-Gravenhage.
ARAB	Algemeen Rijksarchief Brussel.
ASU	Archief van de Staten van Utrecht.
FDGU	Fotodienst Gemeente Utrecht.
GAU	Gemeentelijke Archiefdienst Utrecht.
GRR	Grafelijkheids Rekenkamer, Rekeningen.
NDR	Nassause Domeinraad.
RAU	Rijksarchief in Utrecht.
RSA	Raad van State en Audientie.
TA	Topografische Atlas.

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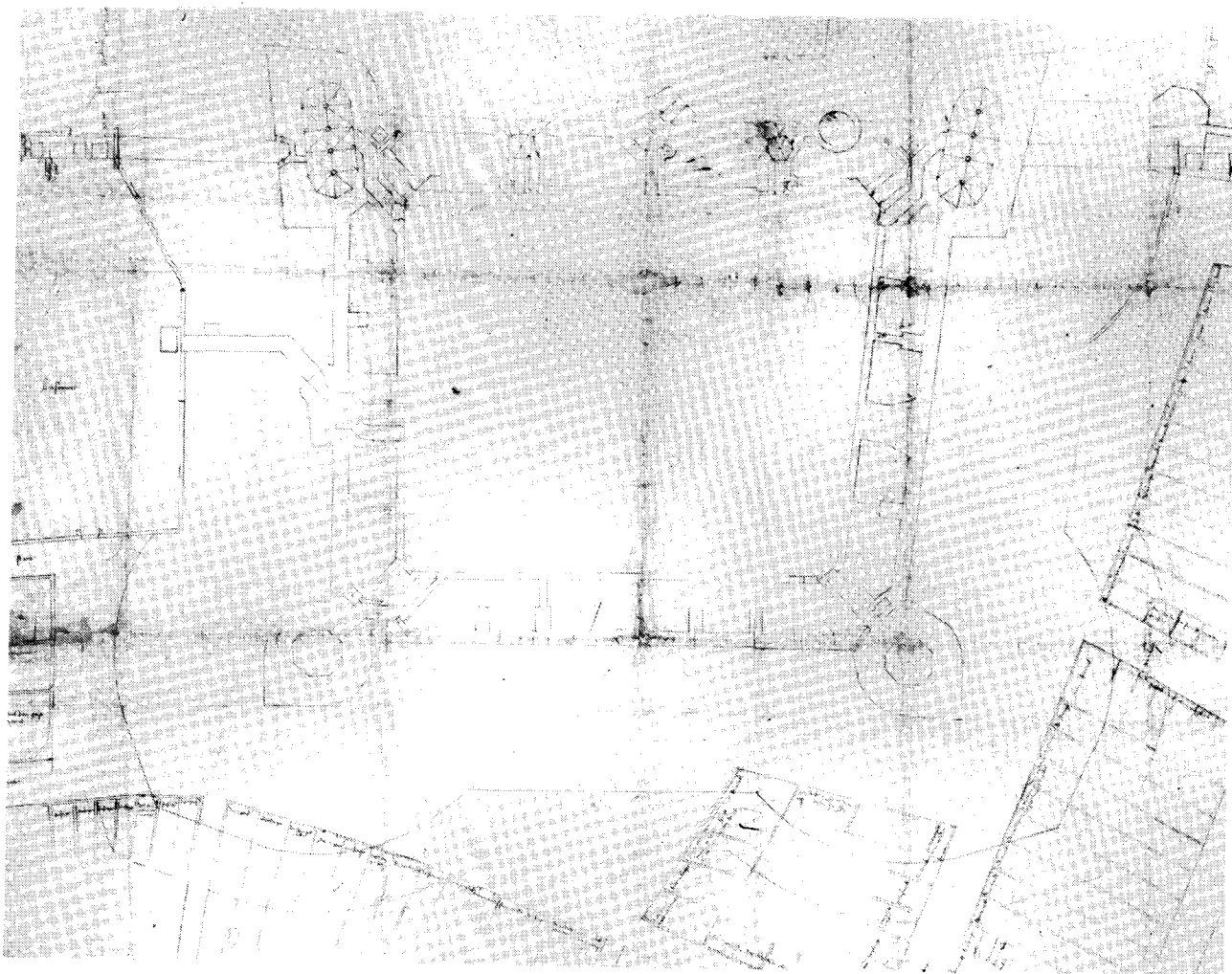
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**FIGURE 1**

*Plan of Utrecht by Jacob van Deventer, ca. 1570. Biblioteca Nacional, Madrid. GAU, TA Ab 26 (détail)*  
*Plan d'Utrecht par Jacques de Deventer, ca. 1570. Biblioteca Nacional, Madrid. GAU, TA Ab 26 (détail)*





**FIGURE 2**

*Vredenburg Castle. Plan and situation by Rombout II Keldermans, 1529. TAU, TA 2088 a. Groundfloor level. In dorso: "Grooten gront t Utrecht ende principael patroen aengaende het casteel, ghemaict by Mr. Rombout van Meghelen". The North is to the left.*

*Le château Vredenburg. Plan et situation par Rombout II Keldermans, 1529. RAU Ta 2088 a. Rez-de-chaussée. In dorso: "Grooten gront t Utrecht ende principael patroen aengaende het casteel, ghemaict by Mr. Rombout van Meghelen". Le Nord se trouve vers la gauche.*

FIGURE 3

Vredenburg Castle. Plan at basement level by G. Brainich, H. de Graaf, T.J. Hoekstra and A.F.E. Kipp, 1981. Scale 1: 1000. The plan has been pieced together from measurements made between 1816 and 1978 on the basis of the Keldermans plan.

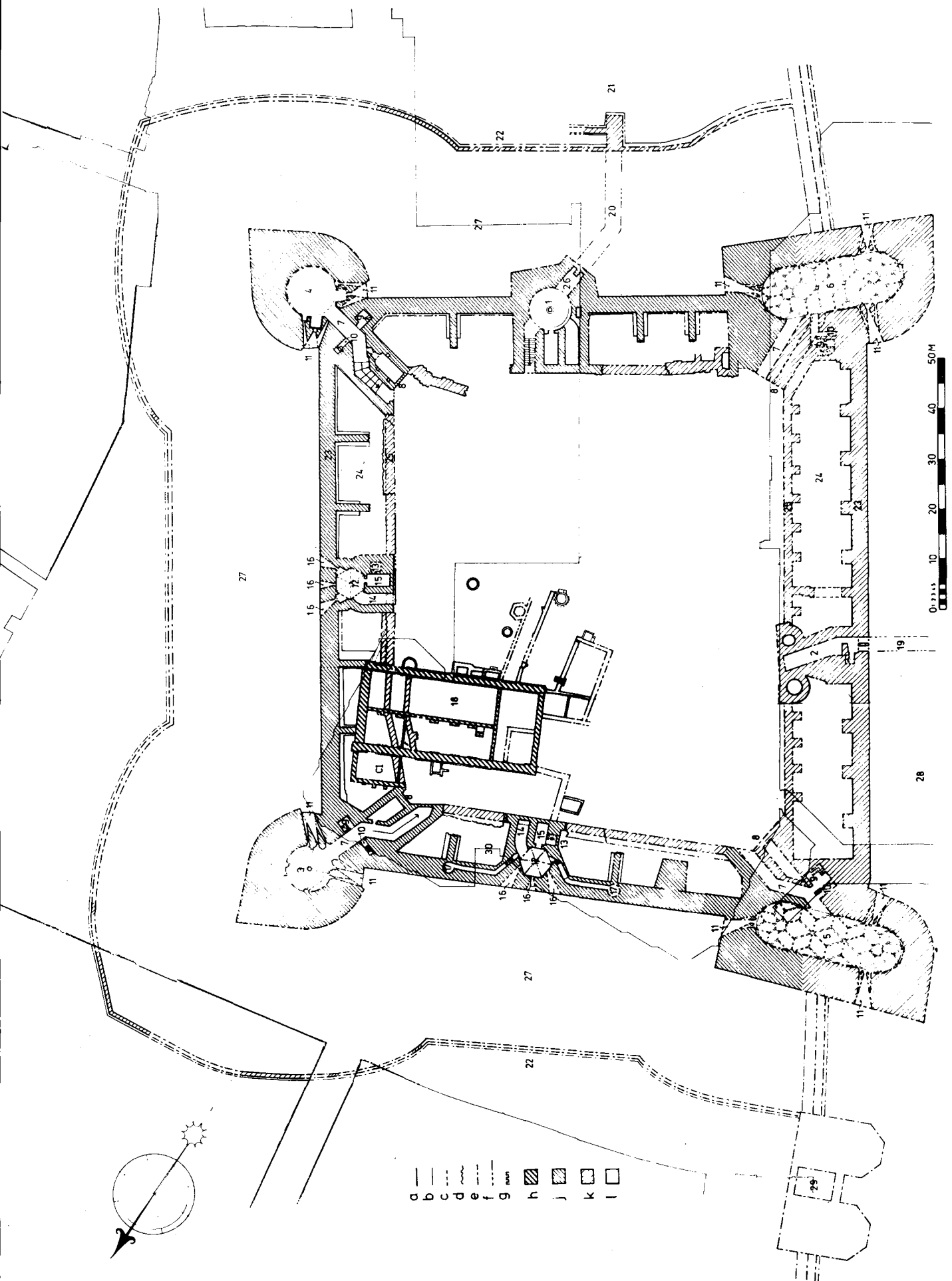
Le château Vredenburg. Plan au niveau des caves, établi par G. Brainich, H. de Graaf, T.J. Hoekstra et A.F.E. Kipp, 1981. Echelle 1: 1000. Le plan a été établi à partir de relevés faits entre 1816 et 1978, sur base du plan de Keldermans.

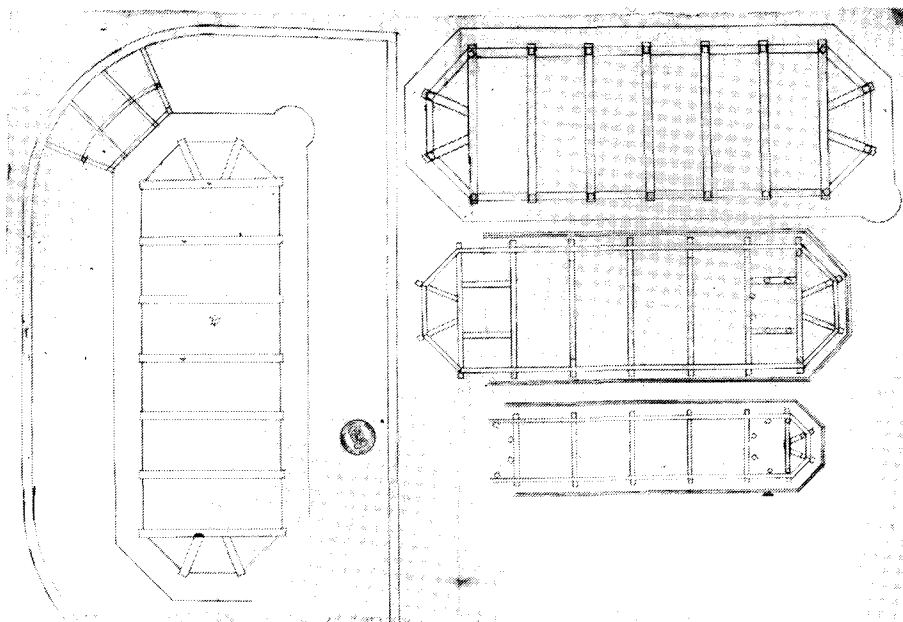
*Legenda:*

1. Main gate-tower – Tour de la porte principale
2. Back gate – Porte arrière
3. Northeastern tower (Vlaamse toren) – Tour nord-est (Tour flamande)
4. Southeastern tower (Hollandse toren) – Tour sud-est (Tour hollandaise)
5. Northwestern tower (towards St. Catherine's Gate) – Tour nord-ouest (vers la Porte Ste-Catherine)
6. Southwestern tower (towards St. Mary's church) – Tour sud-ouest (vers l'église Ste-Marie)
7. Corridors leading to basements of towers – Corridors menant aux caves des tours
8. Corridors leading to groundfloor levels of towers – Corridors menant au rez-de-chaussée des tours
9. Newelstairs to towers – Escaliers en spirale menant aux tours
10. Latrines in towers – Latrines dans les tours
11. Cannonloops in towers – Embrasures de canon dans les tours
12. Hexagonal rooms in fausse-braies – Chambres hexagonales dans les fausses-braies
13. Newelstairs in fausse-braies – Escaliers en spirale dans les fausses-braies
14. Corridors for cannon in fausse-braies – Corridors pour amener les canons dans les fausses-braies
15. Storerooms (?) in fausse-braies – Magasins (?) dans les fausses-braies
16. Gunloops in fausse-braies – Embrasures de canon dans les fausses-braies
17. (Blocked) corridors and rooms for newelstairs in the northern wall  
Corridors bloqués et espaces pour escaliers en spirale dans le mur nord
18. Main building of the Convent of the Order of St. John  
Bâtiment principal du couvent de l'Ordre de St-Jean
19. Bridge across the city-moat – Pont sur le fossé urbain
20. Bridge leading to the baily – Pont menant à la basse-cour
21. Site of the baily – Site de la basse-cour
22. Revetting wall of the castle-moat – Mur de revêtement du fossé du château
23. Outer wall of the castle – Mur extérieur du château
24. Earthen bank – Levée de terre
25. Retaining wall – Mur de revêtement
26. Pit for drawbridge – Puits de pont-levis
27. Castle moat – Fossé du château:
  - a) walls above foundation level – murs au-dessus du niveau des fondations
  - b) foundations only – fondations seulement
  - c) features at different levels – éléments présents à plusieurs niveaux
  - d) broken or otherwise irregular walls – murs interrompus ou irréguliers
  - e) reconstruction – reconstruction
  - f) hypothesis – hypothétique
  - g) toothing – indentations
  - h) conventual period (before 1529) – période du couvent (avant 1529)
  - j) first building campaign (April-October 1529)  
première campagne de construction (avril-octobre 1529)
  - k) later building elements (1530-1535) – constructions ultérieures (1530-1535)

Of the structures left unhatched, the time of building is as yet uncertain.

La période de construction des structures non-hachurées est encore incertaines.





**FIGURE 4**

*Vredenburg Castle. Design for the wooden roofs on the fielward towers by Rombout II Keldermans. 1529(?). RAU, TA 2088b. In dorso: "Vuytrich van den twe groote tornen. R" – Utrecht, for the two big towers R(ombout?).*

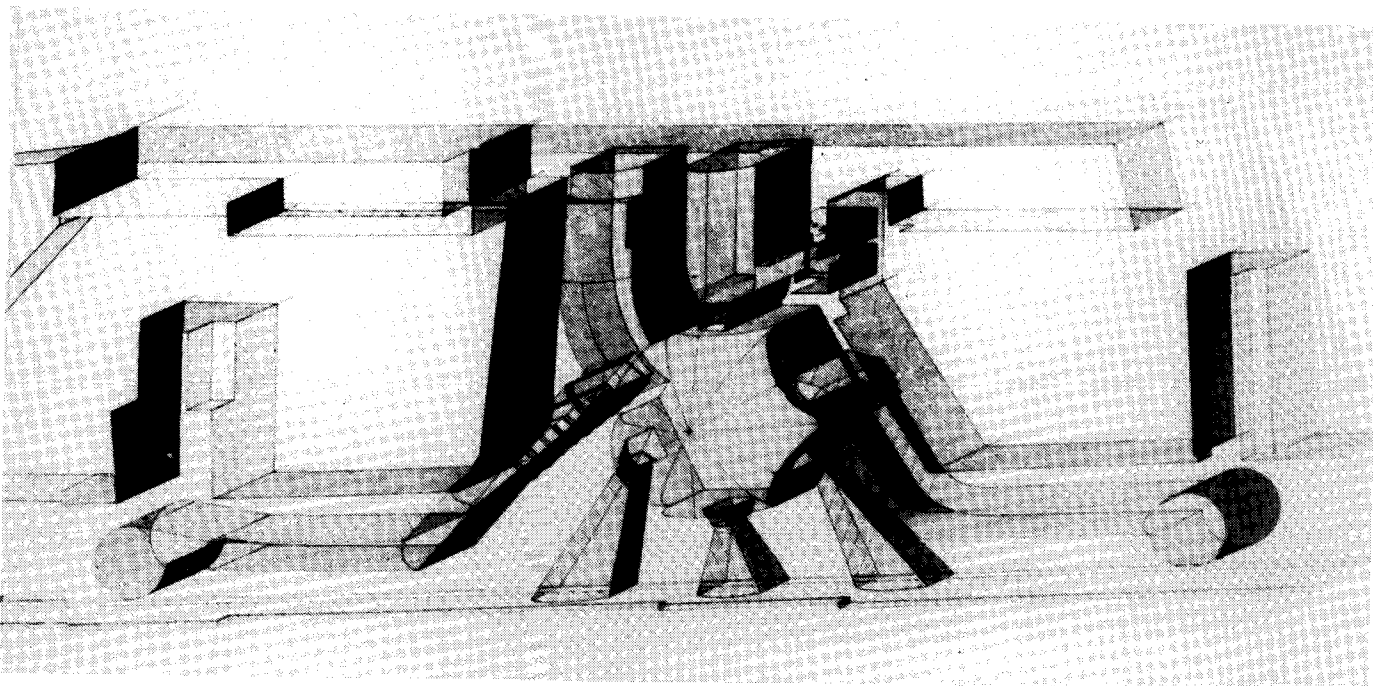
*Le château Vredenburg. Projet des toitures en bois des tours du côté des champs, établi par Rombout II Keldermans. 1529(?). RAU, TA 2088b. In dorso: "Vuytrich van den twe groote tornen. R" – Utrecht, pour les deux grandes tours R(ombout?).*



**FIGURE 5**

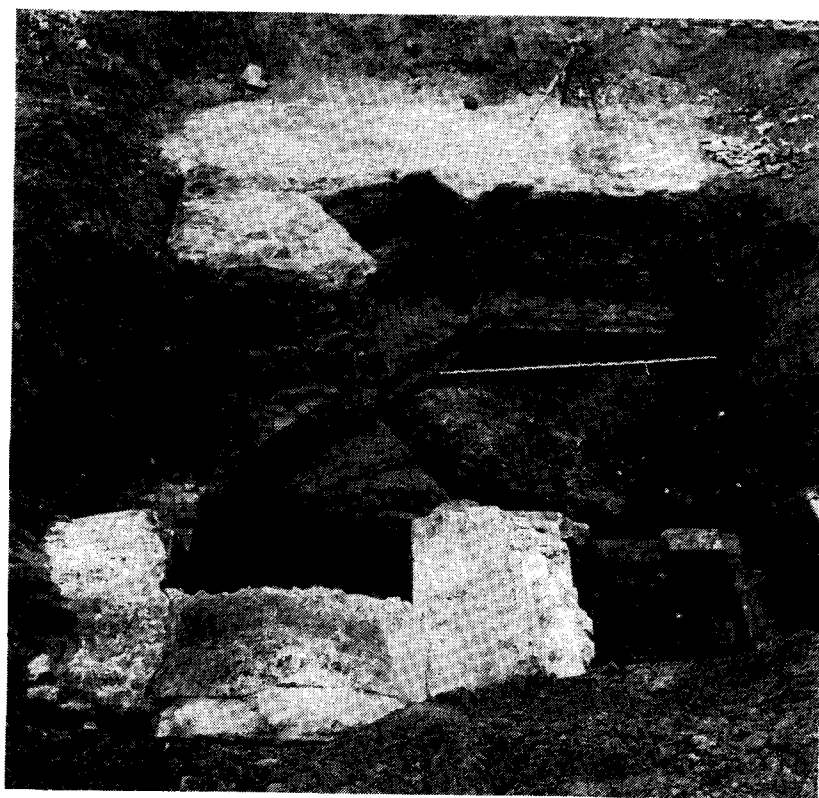
*Vredenburg Castle. Remains of the northern fausse-braye. Hexagonal room with gunloops seen to the Northwest. Photo: FDGU.*

*Le château Vredenburg. Restes de la fausse-braye nord. Chambre hexagonale avec embrasures de canon; vue vers le nord-ouest. Photo: FDGU.*



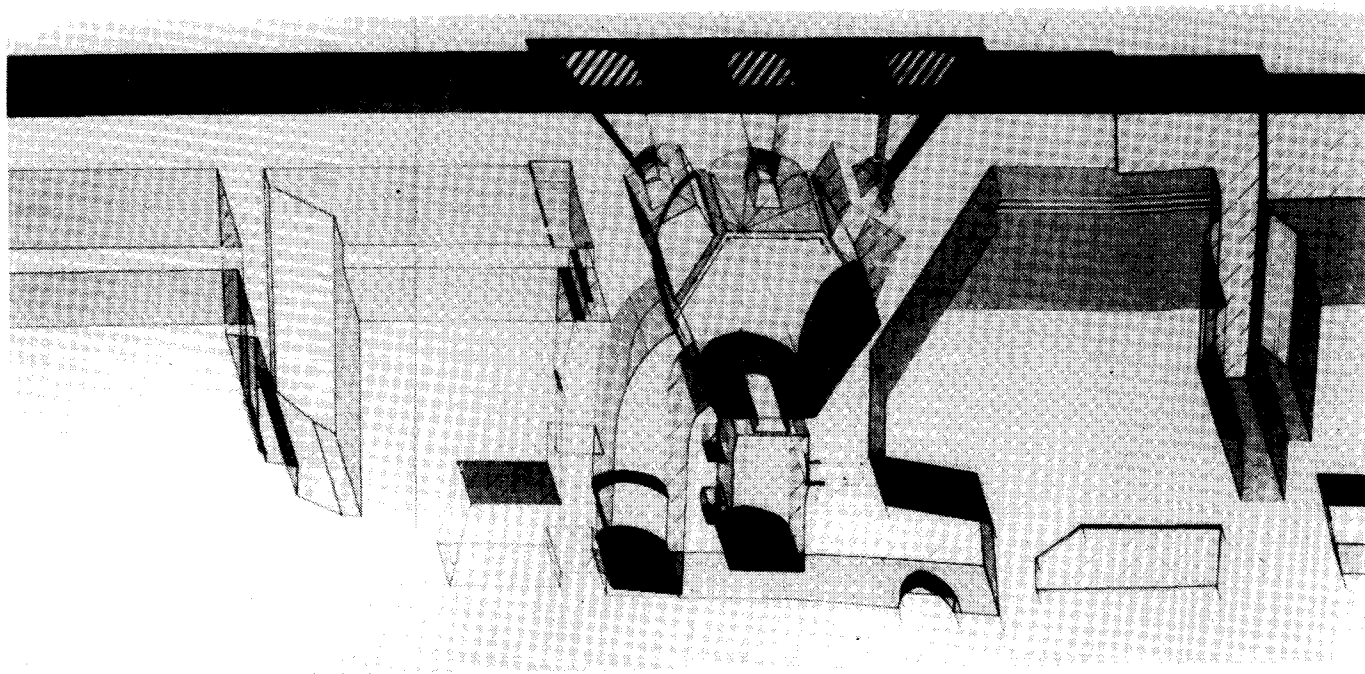
**FIGURE 6**

*Vredenburg Castle. Northern fausse-braie. Axonometric drawing seen to the east. Scale 1: 250. Drawing: A.A.J. Drøge.*  
*Le château Vredenburg. Fausse-braie nord. Dessin axonométrique; vue vers l'est. Echelle de 1: 250. Dessin: A.A.J. Drøge.*



**FIGURE 7**

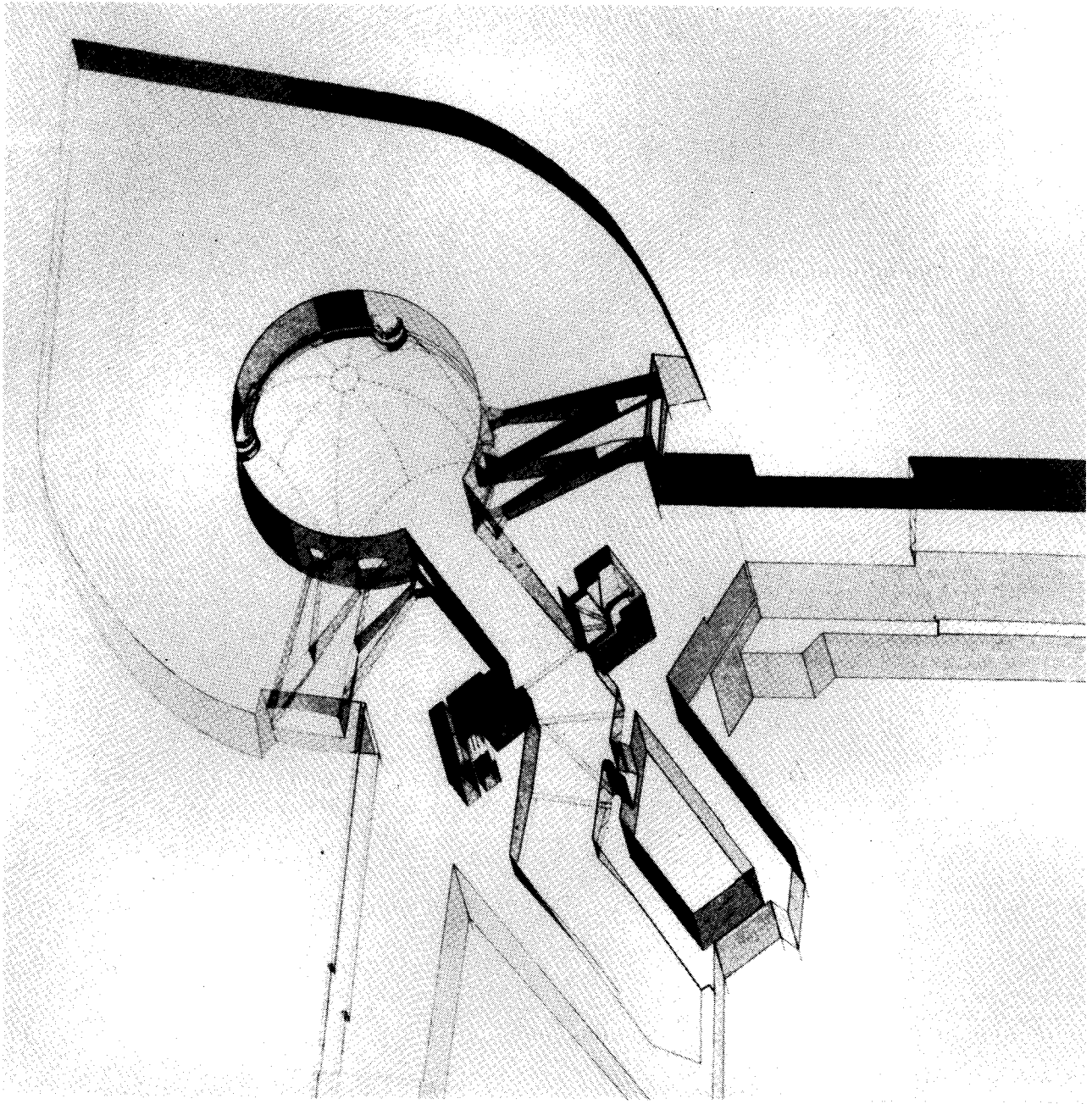
*Vredenburg Castle. Remains of the eastern fausse-braie seen to the East. Photo: FDGU.*  
*Le château Vredenburg. Restes de la fausse-braie orientale; vue vers l'est. Photo: FDGU.*



**FIGURE 8**

*Vredenburg Castle. Eastern fausse-braie. Axonometric drawing seen to the East. Scale 1: 250. Drawing: A.A.J. Dröge.*

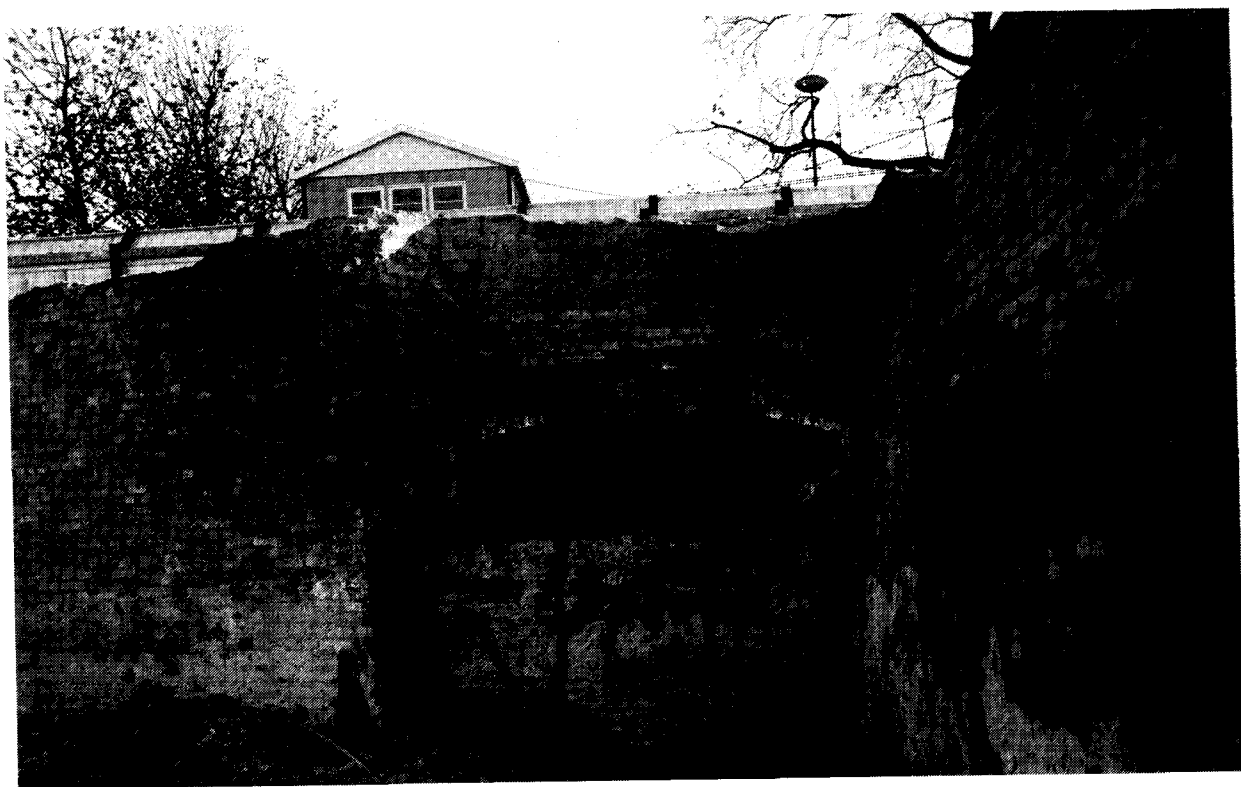
*Le château de Vredenburg. Fausse-braie orientale. Dessin axonométrique; vue vers l'est. Echelle de 1: 250. Dessin: A.A.J. Dröge.*



**FIGURE 9**

*Vredenburg Castle. Northeastern tower. Axonometric drawing seen to the East. Scale 1: 250. Drawing: A.A.J. Dröge.*

*Le château de Vredenburg. Tour nord-est. Dessin axonométrique; vue vers l'est. Echelle 1: 250. Dessin: A.A.J. Dröge.*



*FIGURE 10*

*Vredenburg Castle. Southeastern tower. Mouth of the northern cannonloop seen to the South. Photo: FDGU.  
Le château de Vredenburg. Tour sud-est. Embouchure de l'embrasure du canon nord; vue vers le sud. Photo:  
FDGU*





**FIGURE 11**

*Vredenburg Castle. Northeastern tower. Corridor leading to the lower vault seen to the West. Photo: FDGU.  
Le château de Vredenburg. Tour nord-est. Corridor menant à la voûte inférieure; vue vers l'ouest. Photo:  
FDGU.*

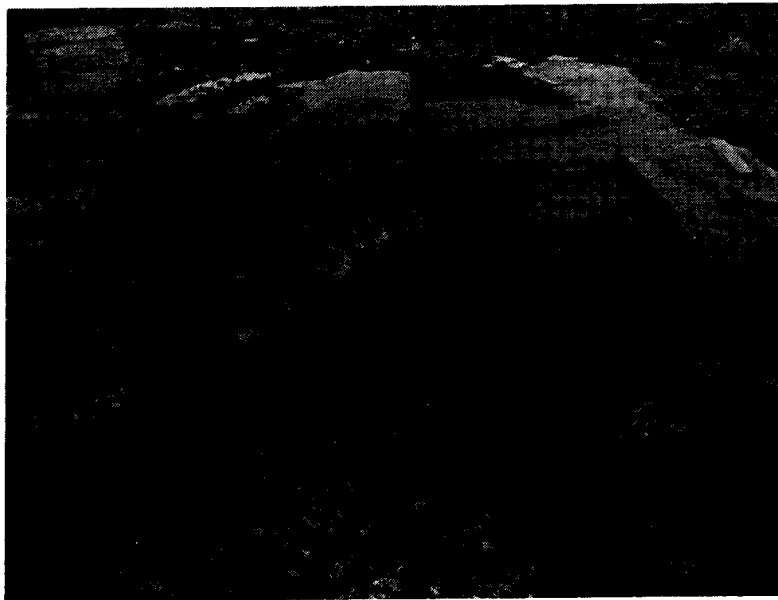


FIGURE 12

*Vredenburg Castle. Southeastern tower. Corridor leading to the lower vault seen to the Northwest. Photo: FDGU.*

*Le château de Vredenburg. Tour sud-est. Corridor menant à la voûte inférieure; vue vers le nord-ouest. Photo: FDGU.*



FIGURE 13

*Vredenburg Castle. Southwestern tower. Interior seen to the East. Unfinished watercolour by C. Hardenberg. 1815. GAU, TA De 30. The lower vault has been removed.*

*Le château de Vredenburg. Tour sud-ouest. Vue de l'intérieur vers l'est. Aquarelle de C. Hardenberg. 1815. GA, TA De 30. La voûte inférieure a été enlevée.*

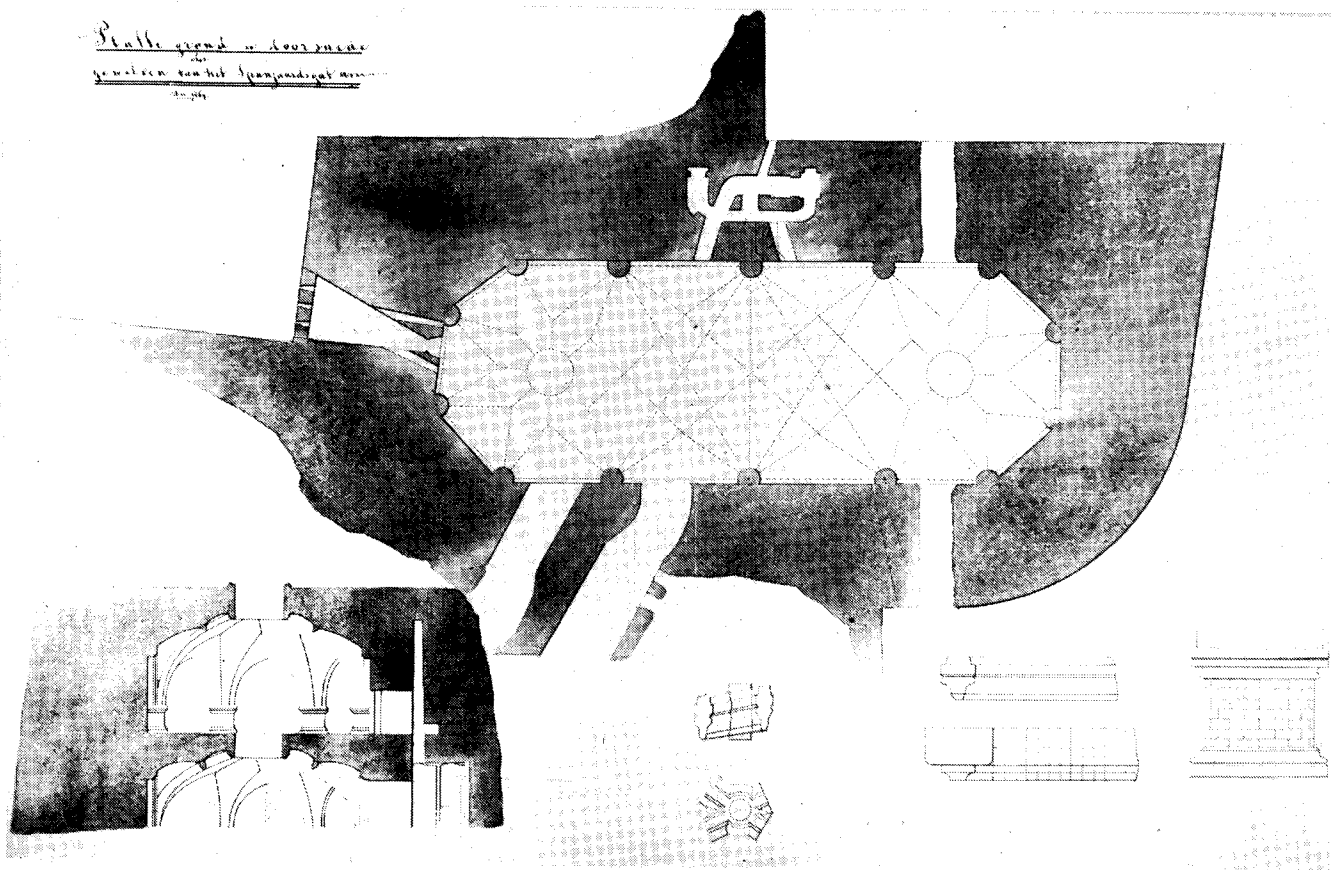


FIGURE 14

*Vredenburg Castle. Southwestern tower. Plan (seen to the South), vertical section (seen to the East) and details. Drawing by D. van der Werf. 1869. GAU, TA De 7. The lower vault has been reconstructed by van der Werf, probably after the one in the northwestern tower which was still extant in his time. The intricate system of corridors in the southern wall of the tower belongs to a hidden sluice through which the waterlevel of the castle-moat could be regulated from the city-moat.*

*Le château de Vredenburg. Tour sud-ouest. Plan (vue vers le sud), section verticale (vue vers l'est) et détails. Dessin de D. van der Werf. 1869. GAU, TA De 7. La voûte inférieure a été reconstruite par van der Werf, probablement d'après celle de la tour nord-ouest qui existait encore à son époque. Le système complexe de corridors dans le mur sud de la tour fait partie d'une écluse cachée, qui permettait d'ajuster le niveau de l'eau dans le fossé du château à partir du fossé urbain.*

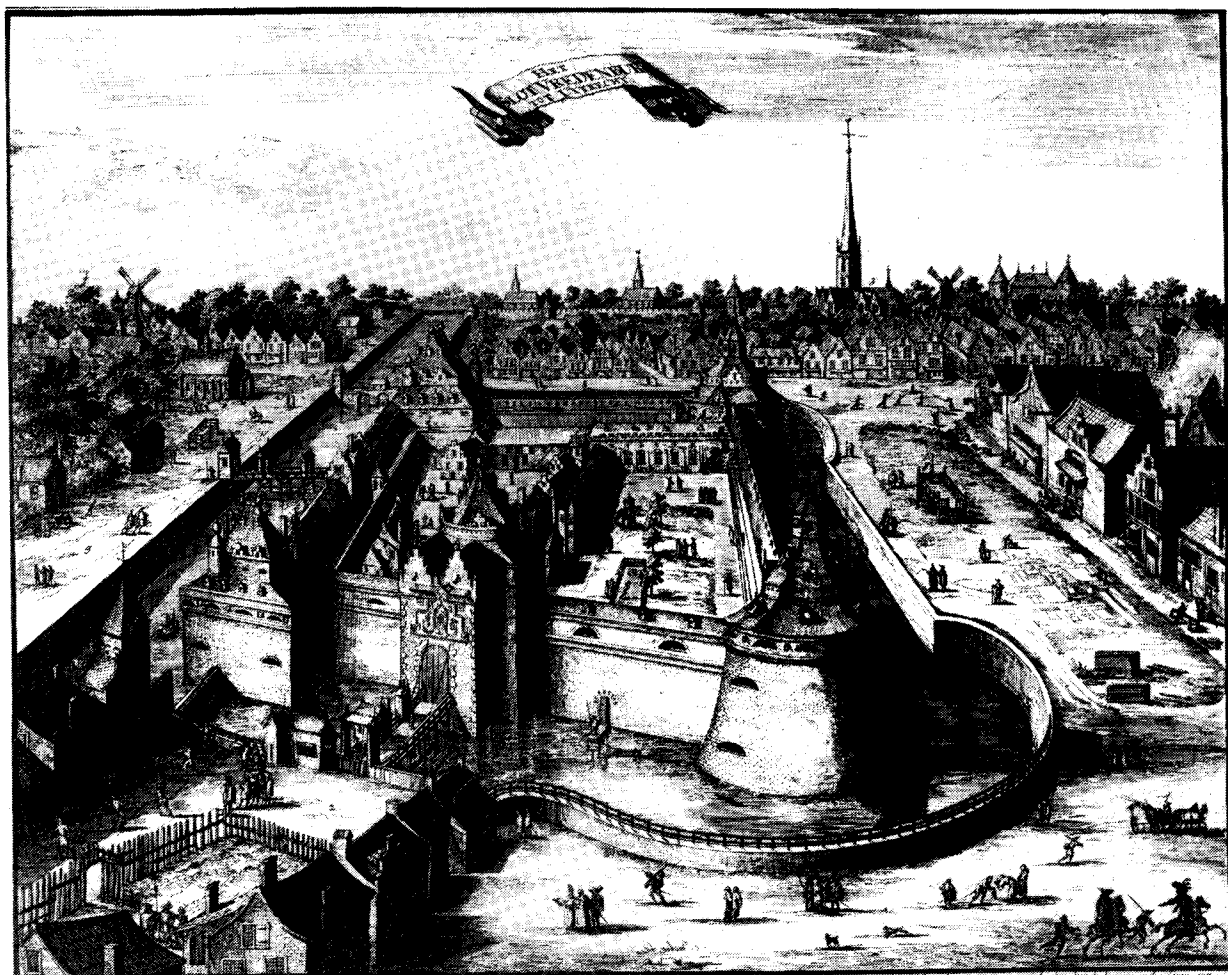


FIGURE 15

*Vredenburg Castle. Bird's-eye view to the North. Engraving by C. Decker after an anonymous painting from ca. 1540. 1656. GAU, TA De 15.*

*Le château de Vredenburg. Vue à vol-d'oiseau vers le nord. Gravure de C. Decker d'après une peinture anonyme de ca. 1540. 1656. GAU, TA De 15.*

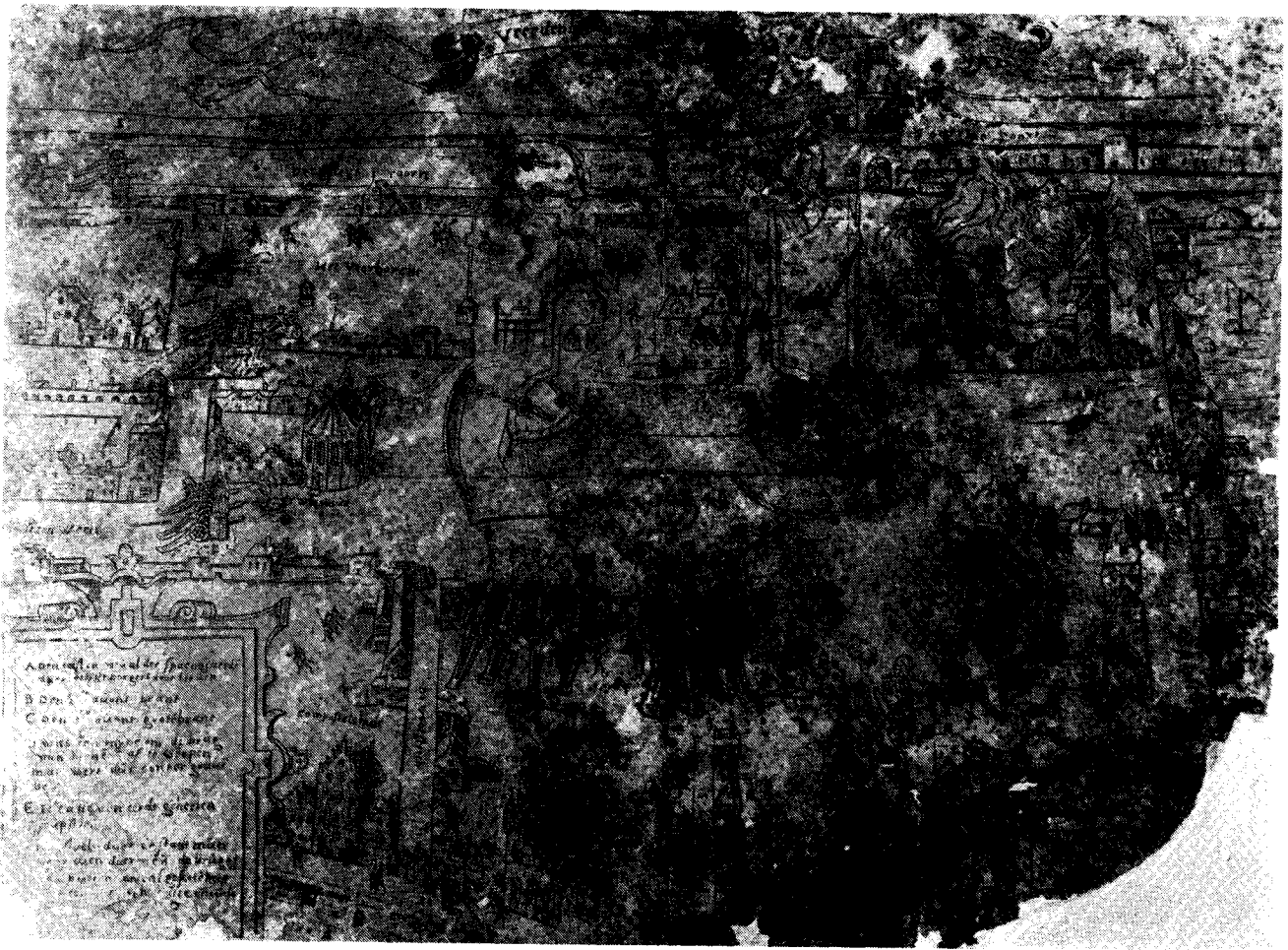


FIGURE 16

*Vredenburg Castle. Bird's-eye view to the West of the siege during the winter of 1576-1577. Anonymous engraving. 1577. GAU, Historisch Atlas Q 77.4. Though unequal in its proportions – especially with regard to men and cannon – this engraving gives a fairly accurate representation of the surrounding houses and of the castle after the "modernization" of 1543.*

*Le château de Vredenburg. Vue à vol-d'oiseau vers l'ouest du siège au cours de l'hiver 1576-1577. Gravure anonyme 1577. GAU, Historische Atlas Q 77.4. Quoique les proportions ne soient pas tout-à-fait exactes, surtout en ce qui concerne les hommes et les canons, cette gravure offre néanmoins une représentation assez précise des maisons environnantes et du château après sa "modernisation" en 1543.*

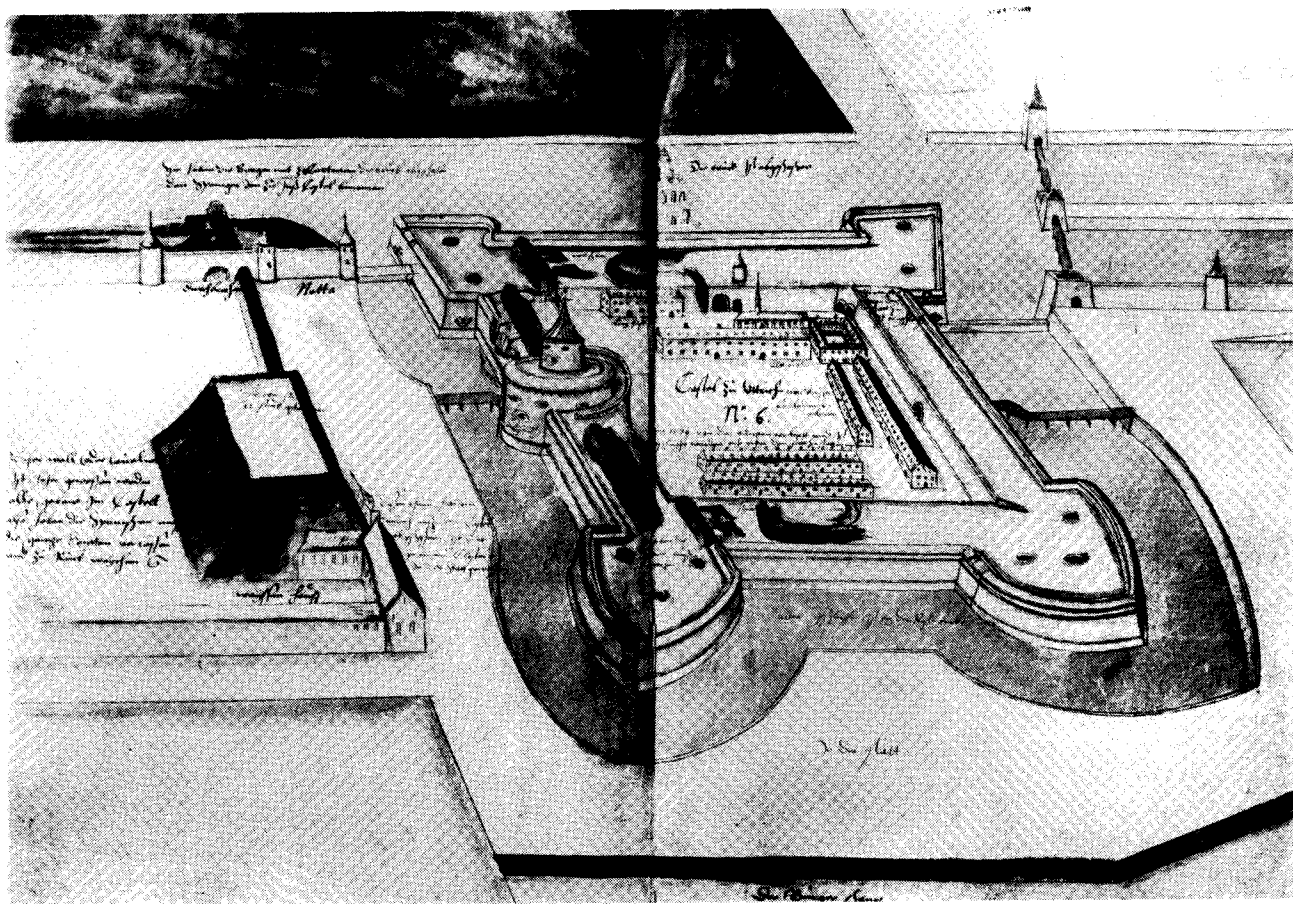


FIGURE 17

Vredenburg Castle. Bird's-eye view to the West after the siege. Drawing by Daniel Speckle. 1577. Generales Landesarchiv Karlsruhe, BRD.

Le château de Vredenburg. Vue à vol-d'oiseau vers l'ouest, après le siège. Dessin de Daniel Speckle. 1577. Generales Landesarchiv Karlsruhe, R.F.A.



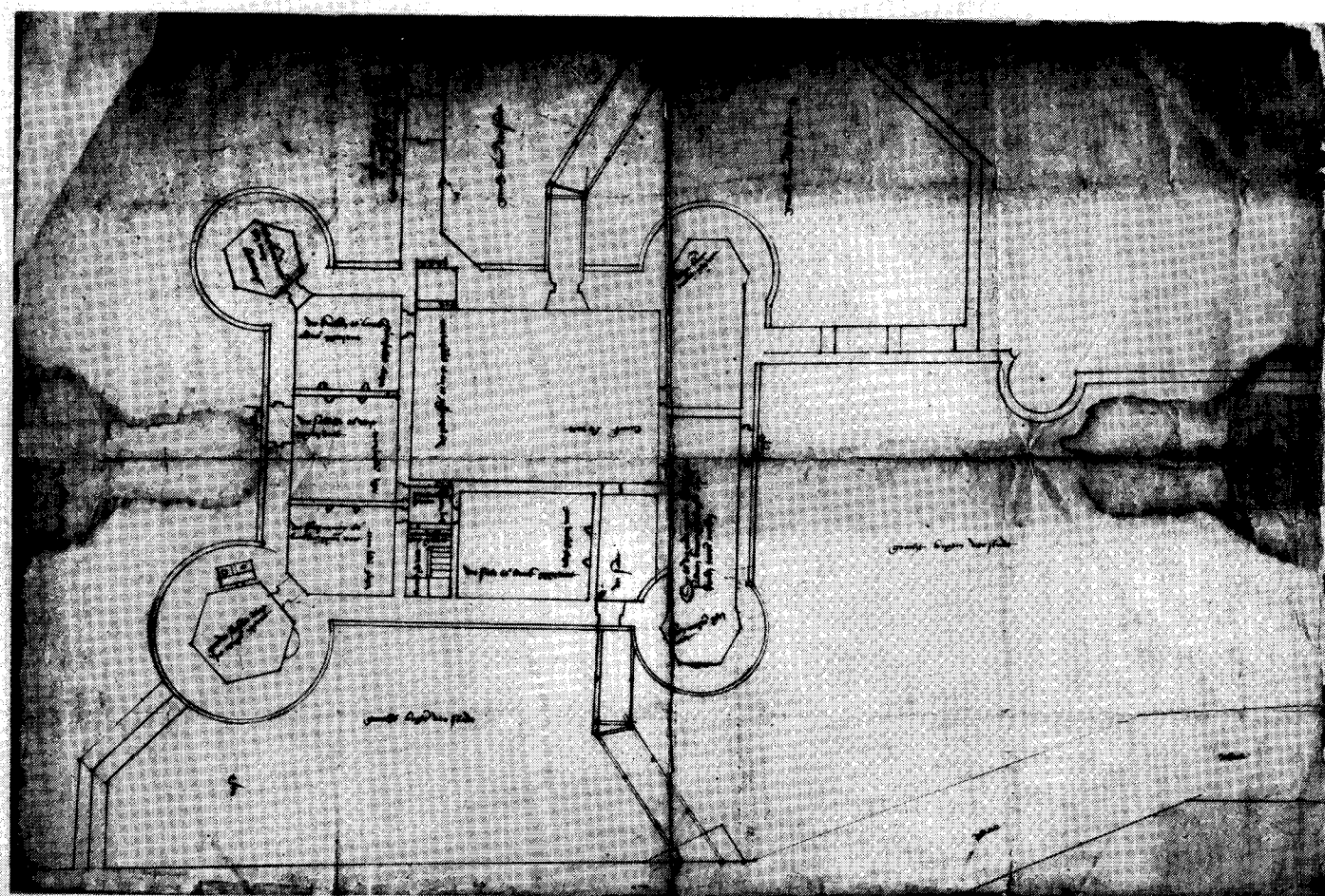


FIGURE 18

*Schoonhoven Castle. Design by Rombout II Keldermans. 1524. ARA, Kaartenafdeling VTH 3352. In dorso: "Patron van den nyeuwen sloete t schoenhoven, gemaict bij Mr. Rombout Keldermans, mr. werckman t Antwerpen, ende den Keijser in Den Hage ... Xlen in julio XXIIII" (Plan of the new castle at Schoonhoven, made by master Rombout Keldermans, master workman of Antwerp, and the Emperor at the Hague ... July 11th, (1524). The town is at the upper righthand corner.*

*Le château Schoonhoven. Projet de Rombout II Keldermans. 1524. ARA, Kaartenafdeling VTH 3352. In dorso: "Patron van den nyeuwen sloete t schoenhoven, gemaict bij Mr. Rombout Keldermans, mr. werckman t Antwerpen, ende den Keijser in Den Hage ... Xlen in julio XXIIII" (Plan du nouveau château de Schoonhoven, fait par maître Rombout Keldermans, maître-ouvrier à Anvers, et l'Empereur à La Haye ... le 11 juillet (1524). La ville se trouve dans l'angle droit supérieur.*

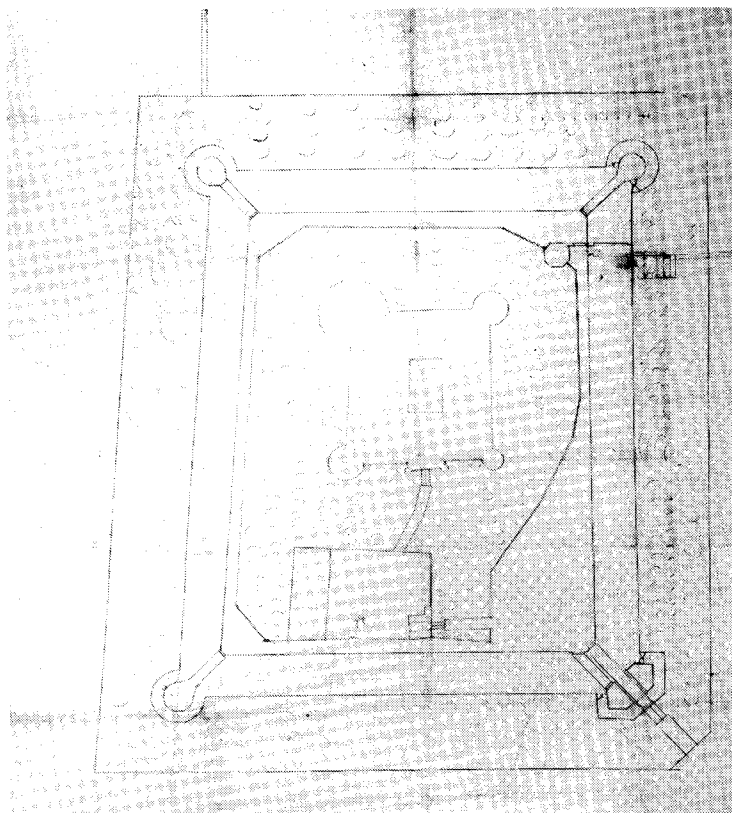


FIGURE 19

*Duurstede Castle at Wijk-bij-Duurstede. Design for the extension of the fortifications attributed to Rombout II Keldermans. 1529-1531. RAU, TA 2088d. In dorso: "Casteel van Duerstede tot Wijck". The medieval castle is drawn in outline in the middle.*

*Le château Duurstede a Wijk-bij-Duurstede. Projet pour l'extension des fortifications, attribué à Rombout II Keldermans. 1529-1531. RAU, TA 2088d. In dorso: "Casteel van Duerstede tot Wijck". Le plan du château médiéval est esquisé au centre.*

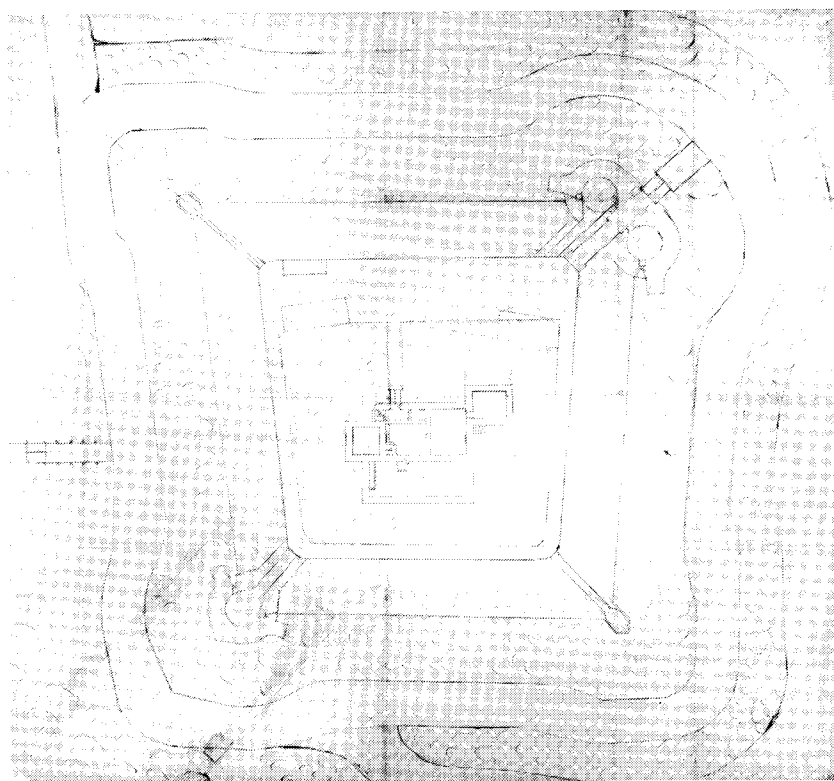


FIGURE 20

*Ter Eem Castle. Design for the extension of the fortifications attributed to Rombout II Keldermans. 1529-1531. RAU, TA 2088e. In dorso: "Dhuijs van der Emde". The medieval castle is in the middle of the drawing.*

*Le château Ter Eem. Projet pour l'extension des fortifications, attribué à Rombout II Keldermans. 1529-1531. RAU, TA 2088e. In dorso: "Dhuijs van der Emde". Le château médiéval se trouve au centre.*



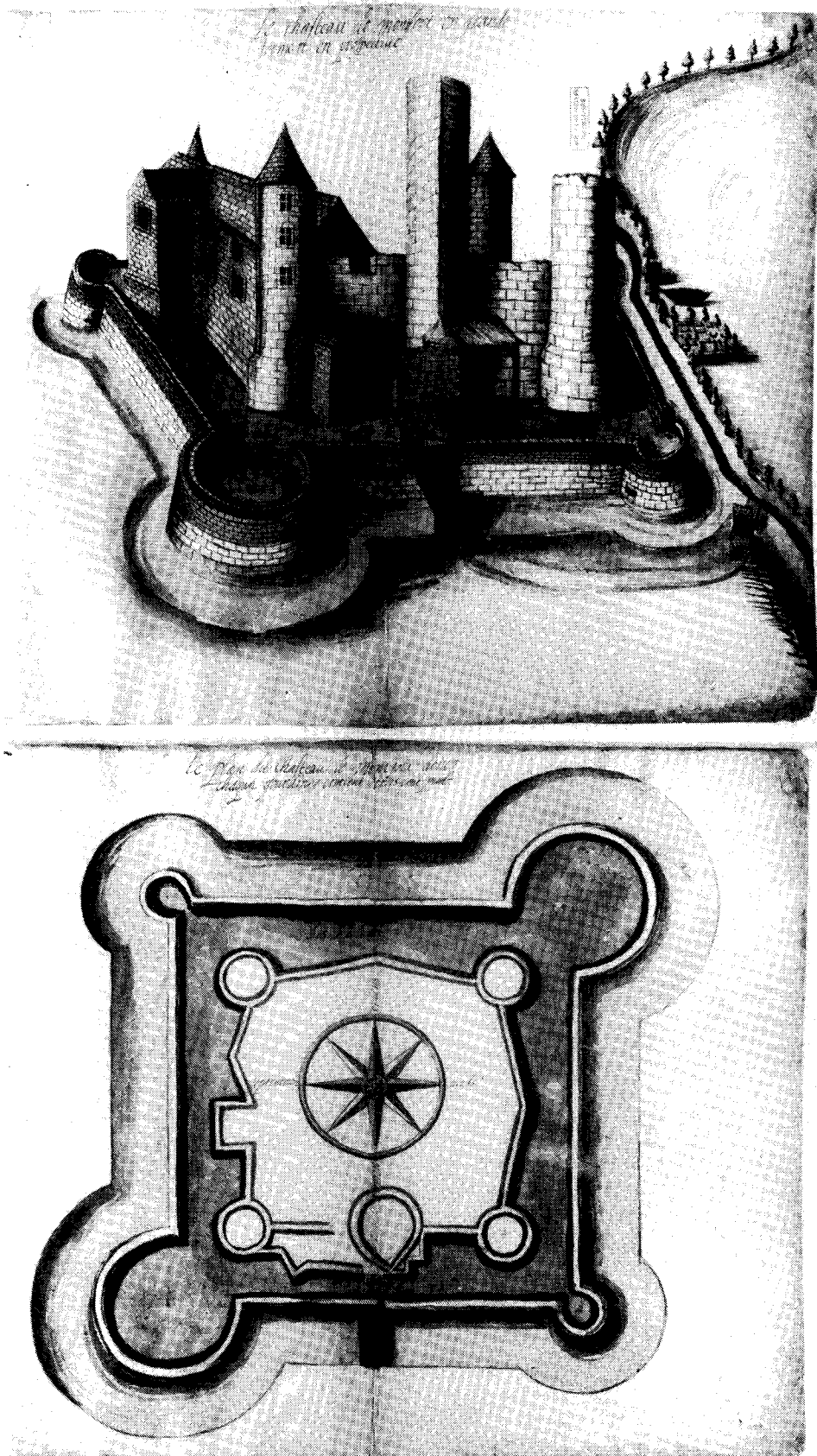


FIGURE 21

Monfort Castle. Elevation and plan seen to the East. Drawing by Philippe Taisne. 1626. ARAB, Kaartencollectie.

Le château de Monfort. Elévation et plan; vue vers l'est. Dessin de Philippe Taisne. 1626. ARAB, Kaartencollectie.