

# ARCHAEOLOGICAL INTERPRETATION OF THE SOCIAL AND ECONOMIC ASPECTS OF THE VILLAGE: THE WATER-MILL AT TERVUREN (B)

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The excavation of a water-mill is not a very frequent occurrence in Belgium or Luxembourg. Until now, a mere three sites have been investigated, of which only the ducal mill of Tervuren dates back to the Middle Ages (*De Meulemeester - Dewilde 1985; 1986b*). In contrast, the mill at Temse was built in the beginning of the 17th century (*Van Eenhooghe 1988; in this volume*). From the early Middle Ages onwards, historical records mention the existence of several water-mills in the valleys of the Pétrusse and the Alzette rivers as well as in the Pfaffenthal, all situated in the territory of the actual City of Luxembourg. Recently, Christiane Bis investigated with our collaboration some aspects of a mill on the left bank of the Alzette. The excavation revealed the waterchannel, the location of the mill-wheel and the point at which it was fixed to the mill-house. This mill had to be dated to an undefined post-medieval period.

From the archaeological point of view, villages in the Belgian area can have a nucleated as well as a dispersed occupation-pattern. The Brabantine village of Tervuren belongs to the first group (*De Meulemeester 1986a,b*). At first, the origin and development of the village was linked with the reclamation movement of the early Middle Ages. This pattern was disturbed by the building of the ducal castle on a site to the east of the primitive village and the subsequent formation of a castle village on this new location, the actual centre of Tervuren. The excavation of the water-mill of the dukes of Brabant forms part of the same research project (*De Meulemeester - Dewilde 1982; 1983; 1984; 1986a*).

The mill itself is situated approximately 1 200 m to the east of the ducal castle, along the Voer. This river, which from the 18th/19th century onwards was more of a slow running brook, provided the necessary energy. The mill was first mentioned in 1293 and eventually stopped turning in the 19th century. For the period from 1403 to 1794 the accounts for annual repairs and for transformation works of all kinds are available and add complementary material to the archaeological information (*Claes 1986*). Unfortunately, the analysis of the historical record had to be stopped for technical reasons and consequently our interpretation is primarily based on archaeology. Of fundamental help in the definition of the archaeological data is a sketch of the lay-out of the mill, drawn in 1515, which even indicates the functions of the different rooms.

From the archaeological point of view, the oldest structure, dating back to the 13/14th century, consisted of a square building (8.60 m x 9.10 m), to the outer wall of which a large wooden waterwheel was attached. It was a half-timbered building, constructed on a solid stone base and it contained nothing more than the workshop with its technical equipment. A projecting stone foundation on the north-western corner of the building carried the wooden millrace. Repairs to this millrace indicate that its length fluctuated between 25 m and 30<sup>1</sup>. This situation persisted until the beginning of the 15th century.

Before 1515, a number of rooms were added to the initial workshop. A living-room, a kitchen, a horse-stable, a cow-shed and a pigsty flanked it to the east and the south. Such an annexe was first mentioned in 1416. Once again the constructions were half-timbered and built on a stone base. According to the accounts of 1448 a new overshot waterwheel was installed. On the 1515 drawing the waterwheel has the same diameter as the length of the northern wall of the workshop, some 9 m. This waterwheel must have been mid-leshot or undershot.

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1 According to the accounts of 1424-1425: 25 m; 1465-1466: 30 m; 1507-1508: 27 m.

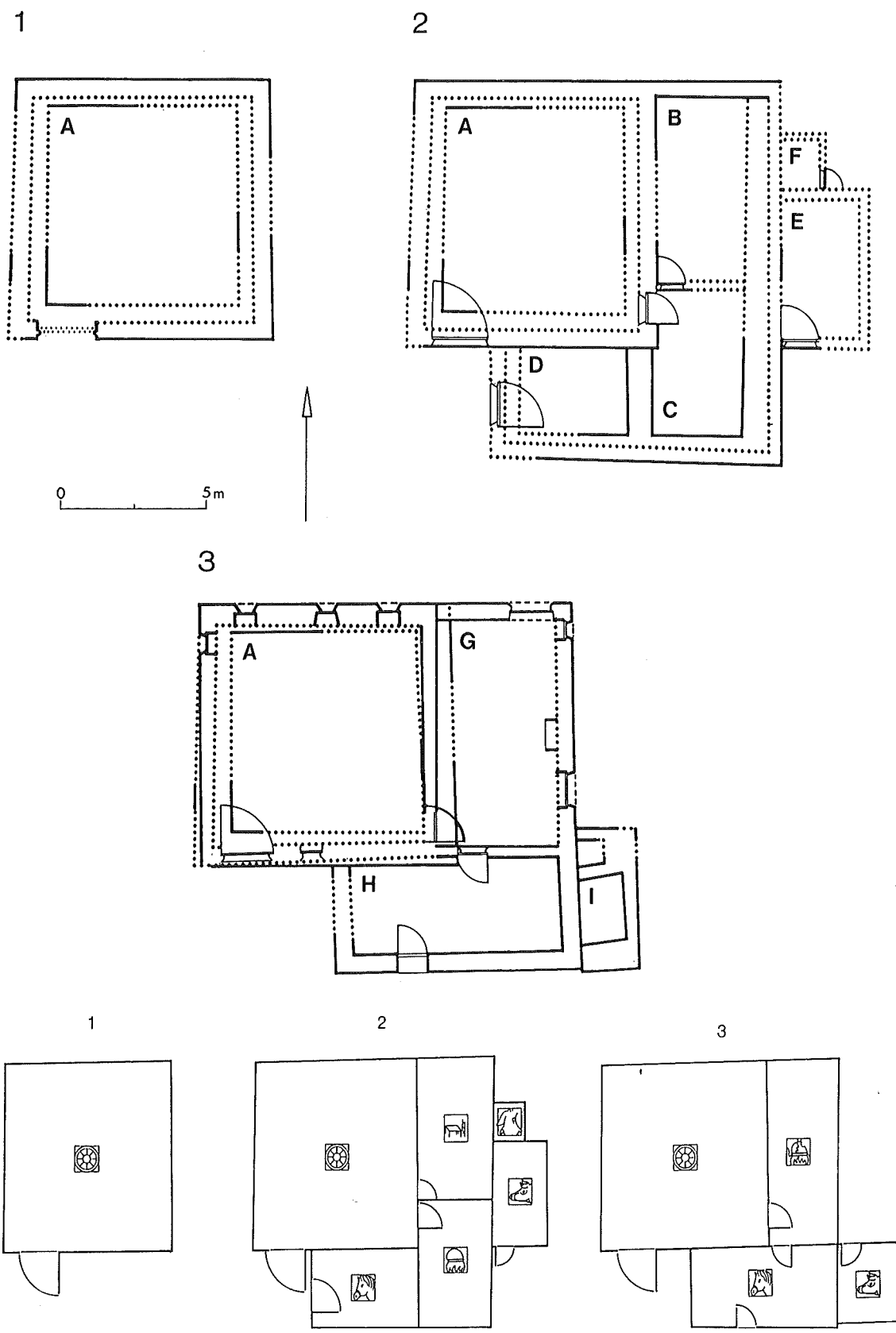
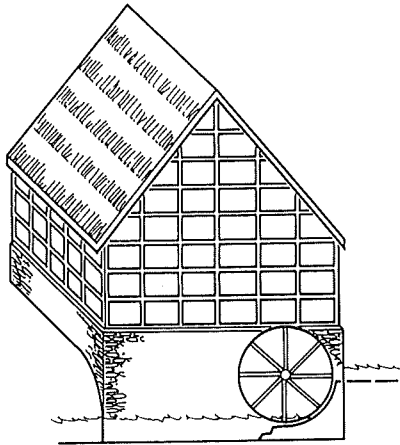
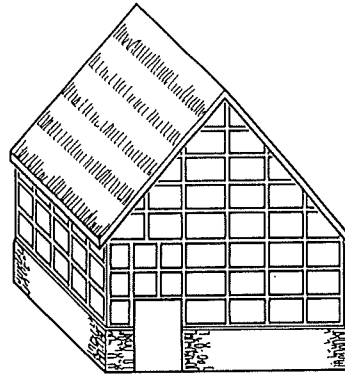


Fig. 1. The evolution of the ground floor of the Tervuren water-mill from workshop to residence (Phase I to III). Phase II corresponds with the map of the early 16th century which mentions the mill-house (*moelenhuys* - A), the living-room (*kamere* - B), the kitchen (*cocken* - C), the horse-stable (*peerdstal* - D), the cow-shed (*coestal* - E) and the pigsty (*verkenkot* - F).

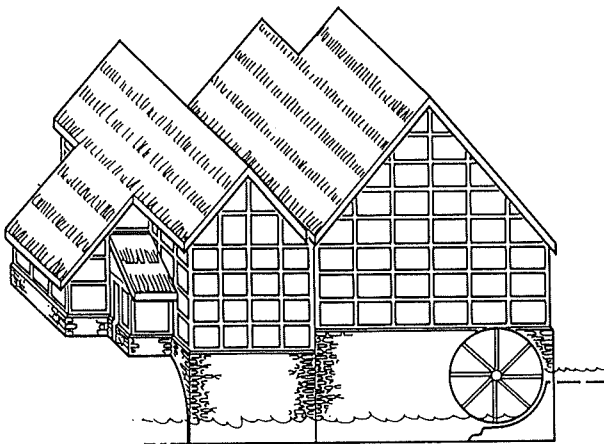
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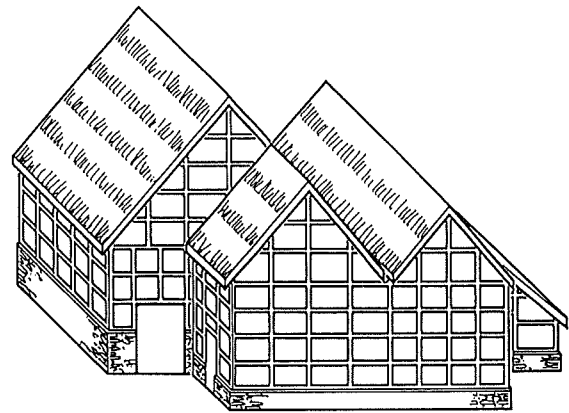
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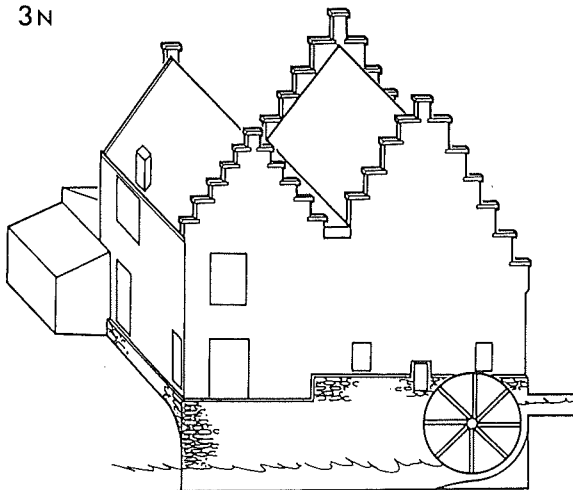
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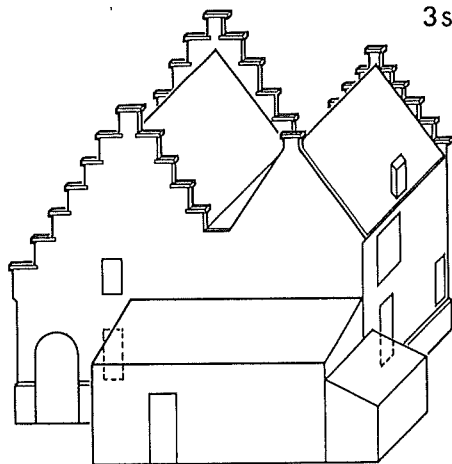


Fig. 2. The evolution of the Tervuren water-mill from a half-timbered building with a stone base (Phase III) to a brick building with stone base (phase III).

In 1533, the complex, which had fallen into decay, was almost completely reconstructed and, on its stone base, a brick building replaced the former timber structures. The building materials were recovered from the ducal castle, where the dungeon was pulled down. The former living-room and the kitchen were now merged together. In the eastern wall of the new room a central hearth was erected, resulting in a reduced level of comfort for the inhabitants. The room now lay over a cellar. To the south a new stable, a pigsty and an oven supplanted the former annexes. In addition, the original wooden millrace was now transformed into a stone channel (30 cm wide, 65 cm high and 15 m long) with a funnel-shaped extremity, directed at a middle-shot waterwheel.

The second half of the 16th century represented troubled times for the whole of the country. This also affected the mill. Large scale repairs became necessary and were conducted at the beginning of the 17th century (at the latest). The disposition of the building was altered yet again. The living-room, east of the mill-house, was divided once more into two chambers, of which the one with the chimney presumably functioned as a kitchen. The southern part received a partly excavated cellar with a vaulted room. To the east, the stable annexes were replaced by one large construction and from this moment on, horses disappeared from the mill site.

During the 18th century, some lesser repairs to both the mill-house and the living quarters were executed, again using building materials removed from the ducal castle, the demolition of which began in 1782 on instructions of its owner, the Austrian emperor, Joseph II.

During the 19th century, the building became completely residential; milling had probably already stopped by the end of the 18th century. Some additional conversions were necessary, mostly to adapt the workshop as a living quarter. Even in the 20th century the building was still further reorganised, to bring more living comfort to the forest-wardens, who lived there with their family until the 1960's.

The importance of this research is twofold. First, a medieval water-mill was archaeologically investigated for the first time in the Belgian-Luxembourgian area, a study which combined excavations with archaeological building analysis. Secondly, the lay-out both of the rooms designed as living quarters for the inhabitants and of the annexes destined for the animals, tell an interesting story about the evolution of the social and economic status of the miller and his family. In the 13th/15th centuries, he probably lived somewhere nearby. Indeed, his function may even have permitted him to reside in the castle itself. Be that as it may, he certainly had sufficient resources at his disposal, since the population of Tervuren and its surroundings was obliged to mill their corn in the ducal water-mill. From the 16th century onwards it seems that the miller took up residence at the mill itself, where he bred cows and pigs to provide subsistence for himself and his family. Nevertheless, his status permitted him to keep his horse(s), which might also have served him in a small farming capacity. This modification may also reflect a change in personnel. Initially, the millers were ducal servants, but later on independent millers, who had to be (partly) self-supporting, may have moved in to replace them. At the very least, the disappearance of horses from the mill compound by the second half of the 16th century indicates a lower social status for the miller family, whose living comfort was further diminished by removal of their separate kitchen.

From the economic point of view, the interpretation of the archaeological data is less evident. The mill of Tervuren was one of many on the river Voer. This indicates the practice of an agriculture largely based on cereals and this until the end of the 19th century, when cultivation of grapes and vegetables in greenhouses took on an important, even dominant, role in the agricultural produce of this area east of Brussels.

#### *INTERPRÉTATION ARCHÉOLOGIQUE D'ÉLÉMENTS SOCIAUX ET ÉCONOMIQUES DU VILLAGE: LE MOULIN À EAU DE TERVUREN (B)*

La première mention du moulin banal de Tervuren date de 1293. Aux XIV<sup>e</sup>/XV<sup>e</sup> siècles, un bâtiment carré, comprenant l'atelier et les installations techniques, fut construit en colombages sur une base de pierres. Nous connaissons la fonction des différentes salles du moulin grâce à un plan de 1515 qui situe le logis, la cuisine, l'écurie, l'étable et la porcherie. La roue occupait toute la façade du moulin. Vers 1533, l'ensemble des bâtiments fut reconstruit en pierres et briques. L'entité logis-cuisine fut réduite à une seule pièce; encore au XVI<sup>e</sup> siècle, les chevaux disparurent du moulin. Au XIX<sup>e</sup> siècle, la roue ne fut plus actionnée et l'atelier du moulin fut transformé en logis. L'interprétation des données purement archéologiques et de l'évolution de la zone d'habitation aussi bien que de la partie réservée aux animaux montre les différences dans les besoins et le niveau de vie des meuniers à travers les différentes époques.

*ARCHÄOLOGISCHE INTERPRETATION*

*SOZIOÖKONOMISCHER ASPEKTE DES DORFES: DIE WASSERMÜHLE VON TERVUREN (B)*

Die Mühle wurde erstmals 1293 erwähnt. Die älteste Struktur, die in das 13./14. Jh. zurückreicht, bestand aus einem quadratisch gebauten Fachwerkbauwerk, das auf einem soliden Steinfundament stand und nichtsweniger als eine Werkstatt mit ihrer technischen Ausstattung umfaßte. Eine entscheidende Hilfe bei der Definierung der archäologischen Daten stellt die Skizze der Mühlenanlage dar, die in 1515 erstellt wurde und die Funktion der unterschiedlichen Räume aufzeigt: Wohnzimmer, Küche, Pferde-, Kuh- und Schweineställe. Das Wasserrad bedeckte die Länge der nördlichen Werkstättenwand. 1533 wurde der Komplex als Ziegelsteingebäude renoviert. Das frühere Wohnzimmer und die Küche bildeten nun einen gemeinsamen Raum, die Pferde verschwanden vom Mühlengelände. Das Mühlrad hörte im 19. Jh. auf, sich zu drehen, und das Gebäude wandelte sich nun gänzlich zu einem Wohnhaus um. Die Anlage der Räume, die als Wohnräume und als Nebengebäude für die Tiere vorgesehen waren, erzählen eine interessante Geschichte von der Evolution des sozialen und wirtschaftlichen Status des Müllers und seiner Familie.

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