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## An Archaeological Window to the History of Bad Windsheim

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### A Short Guide for our Guests

You will also find descriptions on our display tablets in the archaeological window. Additional information is available in a booklet which can be purchased.

Thank you for your visit to Bad Windsheim and to this Archaeological Window to the History of Bad Windsheim

We hope to see you again very soon...





# Welcome to Bad Windsheim



Excavation Area in  
September 2000

Excavation site in  
June 2001 with  
the Archaeological Windows



Dear visitors, honored guests,

When we were confronted with wall fragments of historic cellars during the remodelling of our market square in June 2000, no one was aware of the significance of this discovery. As mayor of our formerly Free Imperial City of Bad Windsheim, I was torn in all directions during the first findings. There was the joy about the historic evidence of our history, but there also was the thought of the expected frustration in connection to monthlong construction delays of this busy and important square in the heart of our historic town center.

Since first encountering the historic discoveries, barely a year has passed until completion of the project. In just a few months, a workable concept was developed in a cooperative effort among city council, architects, employees of the county government of historic preservation, the city construction office and other related administrations as well as local citizens. Therefore, the will of the people was carried out in preserving these significant excavations for generations to come. Many generous donations of Windsheim's citizens, enthusiastic guests and dedicated helpers contributed to the success of the project.

In the framework of an excellently run "City-Buildingblock-Action", more than 340 brass cobblestones were sold for 510 Euro each, which contributed greatly to the preservation of the historic foundations. To show the civic spirit, these brass plaques were installed directly into the cobblestone pavement of the market square.

Bad Windsheim's citizens are proudly reviewing what has been created, and I can promise all guests, that a visit to our newly created market square and exhibit is well worth it.

Wolfgang Eckardt  
Mayor



# Gypsum as Masonry Material



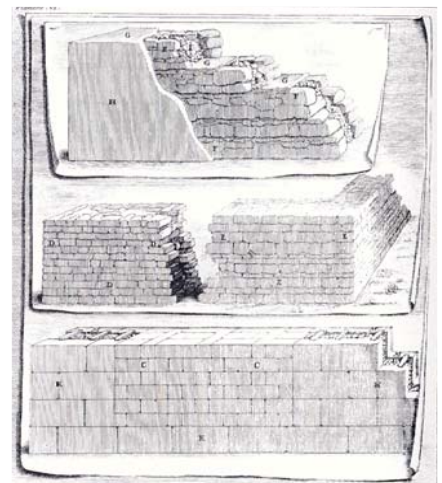
This photo shows the "Rothenburg Gate" shortly before it was torn down in 1883. The durability of gypsum wall suffers greatly due to the weather and environmental influences. The wall surrounding the city was torn down in Windsheim due to danger of collapse.

## Masonry material

Whoever could afford it in those days built his house of covered gypsum stones. Often, only the sides facing the public were covered. In the back of the buildings they often used the "Pouring-technology", whereby timber frames were filled with broken stones and plaster mortar.

Many old buildings in Bad Windsheim still consist of gypsum masonry material. To turn a large rock into smooth working stone of simple form through working or rough hammering represents an impressive achievement of a craftsman's skill.

These old drawings represent different extravagant masonry techniques: The picture above shows a double framed quarrystone wall; the middle picture shows a double framed small block wall, and the bottom picture shows a double framed wall of smoothly worked blocks. The economical version of the double framed construction was widely used in the area around Windsheim. The picture below shows a contemporary illustration of a mediaval construction site.



# Gypsum Mortar and Stones



## Gypsum

Gypsum rock (Gipskeuper) is found at the surface in the Bad Windsheim basin. It is dug up and used as building material. The wealth of the city in "Gypsum and Alabaster" in the year 1897 was valued to amount to 360 Million Gulden. At the beginning of the industrial age, in 1900 there were four gypsum factories, in which it was made into fertilizer, building material and flooring material. Today, gypsum is still dug up but not processed in Bad Windsheim anymore.

## Mortar

The origin of the gypsum burn technique used here for producing gypsum mortar is not known. We are seeing the change-over from carbon-mortar to sulfate-mortar, from burned dolomit to highly burned gypsum. The gypsum mortar is the more recent, higher valued mortar. The fragments created during stone production were often used as supplemental material. Already in the middle ages, gypsum was also used as a flooring material.

## Stones

Especially within the city limits of Windsheim many stones were quarried locally. This is even obvious in this cellar. The gypsum mortar was workable and was used for buildings, city fortification, and much more.



# A Graveyard under the Market Square



Grave 13 with a skeleton in irregular position



Site plan of graves of the 8<sup>th</sup> and 10<sup>th</sup> century and of the later building development

## New customs

During the 8<sup>th</sup> century, Christianity reached our region. The dead were not buried in burial fields outside the settlements but instead near the churches in graveyards. A part of such a graveyard was discovered beneath the current market square. The 45 graves belong to the oldest finds at this location.

## The discovered skeletons

It was determined that there are among the buried people 6 women, 24 men and 12 children. The condition of the skeletons proves that these were a group of physically active people who can be described as well-to-do according to their survived illnesses and eating habits.

## How were the dead buried?

The graveyard shows simple earth graves, burials in wooden coffins, and two burials of children on deathboards. Five of the dead were placed in hollowed out tree trunks a form of burial unknown in Bavaria before that time. Castings of an earth grave and a tree trunk burial can be viewed through the glass pyramid.

# The Discoveries of the Market Square

## Discoveries

Items made of ceramics, metal, glass and bone could have gotten into the ground during construction of buildings, during use or during demolition. The majority of the displayed items were found in the late-medieval outhouses. Here everything was disposed of that was not needed anymore in a household. Remarkably: Contrary to other outhouse discoveries, there are very few items made of wood, leather and textiles.

## Metal items

Metal was found only sporadically in the outhouses, because in the middle ages metal was melted down again. Items for daily use, like nails and knife blades, were fashioned from iron. Also lead was used often due to its low melting point and its ability to be formed easily. Items used on native costumes and jewelry were made of valuable and rare precious metal. During excavation, a gold plated iron buckle, some coins as well as two seals were unearthed.

## Art made of bone

Bone carvers often sawed, ground, turned and carved animal bones, horns, and antlers. In the middle ages, tools, jewelry and toys were made of these universal raw materials. Two knife handles of bone, several clothing beads and Pater-Noster beads as well as game stone were found during the excavations.



Fishing hook made of bronze



Signet ring



money box

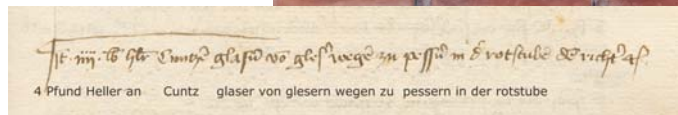


# Window Glass and Glass Processing

## Luxury made of glass

Glass windows have their origins in church architecture and became common during the high Middle Ages also in living quarters of the upper classes. Hollow glass and large window panes were manufactured in glass huts in the forest outside the settlements. They were governed by strict controls, because the enormous amounts of wood they used for their melting furnaces endangered the wood reserves.

A glazier connects bull's-eye panes with lead connectors to create larger panes around 1558 (City Library Nuremberg)  
Entry in the accounting books of Windsheim in 1414 (City Archives)



## Panes and shards

In the excavations on the market square they found in outhouse #1 an amount of broken flat glass with a total weight of over 300 kilograms (c. 660 pounds). These are shards of multi-part leaded window panes. They were formed by pinching the edges with a special tool (Kröselung).

## The art of making glass

In the finds in Windsheim the common green colored glass dominated next to numerous other colors. Some shards carry paintings made of lead solder, mostly simple ornaments, figures are shown less often. A Hohenlohe crest as well as the drawing of a face are quite unique.

## The glassworks of family Glaser

Cutting waste and partial products let us assume this is the inventory of a glass workshop. Since the late 14<sup>th</sup> century a family Glaser, who is named after their profession, is listed regularly in city billings for Windsheim. After they were listed for the last time in the year 1451, they possibly gave up their workshop and disposed of the rest of their materials in the two outhouses.

## The Private Facilities

### Trash disposal in the Middle Ages

Removal of garbage has been a problem throughout the ages. To avoid the constant filth and stench in the streets, the citizens were forced to dispose of the trash also in garbage shafts below ground. Those often consisted of abandoned cellars or wells and were emptied regularly by so-called Pappenheimer (colloquial term for simple person) or masters of the night.

### Close to drinking water: the outhouses

Two outhouses were unearthed on the Windsheim market square. In the middle ages, they were often found near wells, because knowledge of epidemics caused by impure water was not known. In Bad Windsheim there is barely 3 meters (c. 10 feet) between the market well and the outhouse.

### What the outhouses disclose to us

Here citizens disposed not only of human waste and kitchen scraps, but also of anything that was broken or not needed anymore. The numerous discoveries from the market square outhouses, for example ceramics, give us a good overview over the living conditions, economic conditions and social conditions in the 14<sup>th</sup> and 15<sup>th</sup> century.



In this picture of 1564, a monk falls down the stairs on the way to the outhouse. To the right an open air double seater outhouse is visible; above it straw as "ass wipe".



# Pots Bottles Tiled Stoves

## Ceramics

In the Middle Ages, cooking and storage dishes consisted of fired clay, the finer table service was mostly made of metal. A broken pitcher was seldom mended, instead just thrown away. Since ceramics almost always stays intact, it represents the largest group of finds of every archaeological dig.

## Tabel culture

From the market outhouses came a multitude of late medieval clay containers: cooking and storage pots, occasionally with a ceramic cover, pans, bottles with handles and water bottles. The dining table was set with ceramic mugs and bowls. In addition, small tallow lamps and wooden chips provided minimal light.

## Comfortable tiled stoves

During the colder season, smokefree rooms which were heated by tiled stoves provided special comfort. Since the 14<sup>th</sup> century, the outside wall of these stoves were covered completely with tiles. The simplest, most often used type of tiles is the bowltype which was pulled apart at four edges, as is seen in the Windsheim find.

## True rarities

An important view into life in the middle ages is provided by unique dishes which were also found in the outhouses: a savings box plundered of its content, a piece of a cup with spout, as well as specially made cups in which an artist mixed his paints.



Sausage kitchen on the day of butchering





# The History of Bad Windsheim

## A royal present

In 742 the Franconian rulers, Karlmann and Pippin, presented to the newly founded diocese Würzburg altogether 26 churches located in East Franconia, among them St. Martin in Windsheim. The graves which have been discovered on the market square likely belonged to this church.

## The first stone buildings

As has been common since the 8<sup>th</sup> century, the village was located next to church and graveyard. The village consisted of wooden houses. Yet, already in the 12<sup>th</sup> century, an early urban stone building was erected here. The excavated wall fragments can be viewed in the exhibit rooms.

## Documented references as a city

The founding of an urban settlement is dated around 1200. In a document from 1234, the location is described as a market of the Bishop of Würzburg. Windsheim as a city is first documented in 1284, and as an imperial city it is documented since 1295.

## Windsheim on the move

Through regional trade with Nuremberg, an economic boom was experienced here in the 14<sup>th</sup> century. Windsheim even had its own measure of volume of grain and wine. Already at the beginning of the 15<sup>th</sup> century, this wealthy city had reached its maximum capacity.



City map of Windsheim from the year 1829 and oldest city seal



The city judicial court seal of 1398 shows an eagle facing right surrounded by the words SIGILLUM JUDICII DE WINDESHEIM (Seal of the court of law of Windsheim)



# Water for the City

A clear subject

Clean water is necessary for the inhabitants of every city not only for food preparation and hygiene but also for many skilled trades. Where there was no open water within easy reach, wells served the purpose of public water supply in the 19<sup>th</sup> century. There were private wells as well as public fountains which were often placed on market squares.

The market well of Windsheim

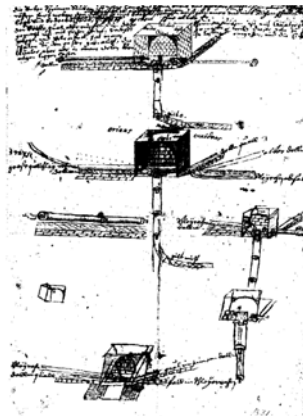
The center of Windsheim is located at the top of a gypsum rock. In order to reach water, a shaft had to be drilled through the rock for 13 meters (c. 43 feet). The wall of the well consisted of carefully worked sandstone blocks. The crown was located above the well pouring fixture and most likely some type of roof as covering.

The discoveries

During excavations it was discovered that the Windsheim well shaft was empty up to a depth of 10 meters (c. 33 feet). Its lower portion contained mud and construction debris with some finds from the 18<sup>th</sup> and 19<sup>th</sup> century. The well was built around 1408 and finally abandoned in 1810 due to bad water quality.



"Beautiful fountain"  
erected 1572



Elevation of the  
New, the later  
Beautiful Fountain

The city chronicle of 1642 shows an entry describing the remarkable fountain which existed on the market square from 1408 to 1810:

*"Den 14. April ist der Schöffbrunnen auff dem Marckt abgedeckt, die Steinernen Säulen und das Holzwerk aus gebessert, her nachen wieder mit Zihnnwerck"*

# Auf Wiedersehen in Bad Windsheim



Looking forward to  
your return to  
Bad Windsheim



Impressum:  
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Thomas Spyra, Stadtbauamt Bad Windsheim  
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