# MÖLNDALS KVARNBY









## The rapids

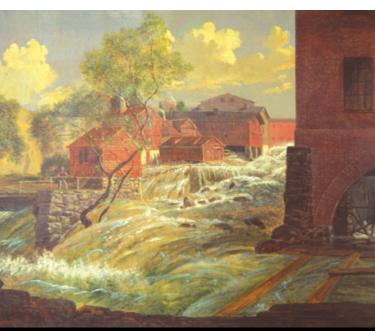
#### - origins of the industrial era

Mölndal means mill valley. The name has been known since the Middle Ages and refers to all the mills built along the mighty rapids of the Mölndal River. The rapids as well as the large number of mills along them drew the attention of Swedish and foreign artists and historians during the 17th and 18th centuries.

The rapids are about 800 metres in length, and fall a total of 48 metres over this length.

The plains below the rapids were fertile agricultural soils; the farmers needed mills to turn grain into flour, and the timber from the big forests upstream needed to be sawn. The rapids were an excellent source of power for both.

Once the technique of harnessing the water's power had been learned, it was also used for other purposes. The term mill continued to be used to describe the industries that used the rapids as a direct source of power. The rapids were later divided into different "mill falls".



At the end of the 17th century there were at least 35 production units, with flour mills, sawmills, stamp mills and paper mills.

Later, with the growth of industrialism, these were joined by spinning mills, weaving mills, brazil mills, sugar mills and oil mills. The entire length of the rapids was edged by buildings.

The area next to the rapids is still named Kvarnbyn – Mill Village.

# From local market to being a part of the world economy

A milestone in Kvarnbyn's development was the founding of Göteborg (Gothenburg) 1621. The Crown (the state) donated 17 mills along the Mölndal rapids to the new town "with all the Crown's rights". The income from these mills was so great that they were enough to pay the salaries of all Gothenburg's public officials.

New mill owners from Gothenburg added new capital and new knowledge, which further developed Kvarnbyn. A lively trade began with the new town. The market for the various products being made here grew steadily as Gothenburg itself grew.

Constant construction in the new town required a lot of timber. Some of this was felled in the upland forests, floated down to Kvarnbyn, sawn there and then taken on to Gothenburg on the Mölndal River.

Farmers from the area around Gothenburg often transported their grain to Kvarnbyn in Mölndal, milled it there and got flour in return.

Brazil wood, which was imported from Brazil and was a raw material for the dyeing industry, was shipped on barges from the port of Gothenburg to Kvarnbyn, as was American cotton and linseed from Russia

The returning vessels might carry wood products, dyed cotton cloth, paper and linseed to be sold in Sweden or exported abroad.

## The big industries

During the final part of the 19th century Kvarnbyn grew into one of Sweden's more important industrial regions. The industries that became dominant were the paper and textile industries and the oil mills.

#### The paper industry

The first paper mill in Kvarnbyn opened in 1653, manufacturing paper by hand out of old textile rags. This mill closed down, but in 1736 Mölndal paper mill opened. Under the ownership of Esbjörn Schiller, this grew to become, periodically, Sweden's biggest hand paper mill.

In 1763 Korndal paper mill opened downstream of Forsebron (Rapids bridge). Samuel Norberg, a printer, bought both mills and concentrated manufacturing to Korndal.

A century later the mill was part of Rosendalsverken (the Rosendal works), built up by David Otto Francke, who was also known as the "king of Mölndal". Production had been mechanised, and Rosendal was the biggest and technically most advanced paper mill in Sweden.

During the 1870s, experimenting in the Götafors factory that Rosendal had acquired, engineers and chemists successfully created a sulphite liquor which, when combined with wood chips, produced paper pulp. They patented this so-called sulphite method.

In 1893 the works were taken over by the Wallenberg family, who further expanded it and made it known throughout the world under the name of Papyrus. Paper production was discontinued in Mölndal as recently as in 2006





Workers at "Strumpan" 1929. Photo: the Museum of Mölndal

### The textile industry

In the 17th century there was a stamp mill by the rapids. They milled broadcloth, a coarse woollen cloth which was made denser and finer by "stamping". Broadcloth was used to make uniforms for the military, including the famous blue uniforms of Charles XII's soldiers, the karoliner.

Large-scale manual production, or manufacturing, continued at the mill for a long period of time. Industrial activity only began in the 19th century: around 1830 Gustav Ferdinand Henning, a merchant, set up fully mechanised spinning mills at Mariedahl and Rosendahl. More spinning mills were built along the rapids later in the 19th century.

As a complement to these spinning mills new activities began, such as dye works and mills for making dye out of brazil wood or chalk.

Textile industries were principally workplaces for women, often with between 100 and 200 employees.

Famous company names from the period include Götafors cotton mill (later Eisers Trikå) and Samuelsons stocking factory (nicknamed "Strumpan"/"the Stocking"), where Sweden's first seamless nylon stockings were made.

The labour-intensive textile industries went out of business during the textile crisis of the 1970s. The last one, "Strumpan", closed in 1982.

#### The oil mills

The first oil mill in Kvarnbyn opened in 1802. It produced linseed oil, which was extracted from linseed using stamps. The oil was used in making paint, among other things. The raw material was initially bought from Swedish growers, but as production expanded the mill had to start importing linseed from Russia and South America.

Mendel Elias Delbanco opened an oil mill in 1827 which eventually became the largest in Sweden.

Oilcloth was also made here at an early stage. In 1916 Delbanco's company was merged with another oil mill company to form Svenska Oljeslageriaktiebolaget, SOAB (the Swedish Oil Mill Corporation).

Production was developed and modernised during the period between the wars, and this included building a tall storage silo for linseed. The mills also started producing chemical products.

Linseed oil production continued until the 1960s, while paint binders were produced until 2007. The linseed oil was by then being bought externally.

Hydropower was used right up until the 1980s. The power station was located by the rapids, but was run on natural gas during the final years. Water was then used for cooling purposes and to produce steam for the production process.



#### Housing and social services

Sweden experienced considerable population growth during the latter half of the 19th century. Not everyone could earn a living from agriculture, but the emerging industries needed plenty of labour.

Newly arrived workers in Kvarnbyn had to live in the factory attics to begin with, but soon special tenements were built in which up to 20 families could live.

Eventually the major industries began letting their land on either side of the river to workers who wanted to build their own homes. They were able to get loans from their employer and a leasehold, often with regulations about laying out a garden. It became an early example of a district of owner-occupied workers' homes.

The steep terrain, along with poverty and crowding, called for special solutions. Several families might share one house, with each flat having its own external entrance – which meant that those living at the top had to have a bridge between their entrance and the top of the next hill.



Each block, or "rote", had a letter designation and each house a "rote number", e.g. Roten M 27. They usually also got a popular name after the owner, e.g. "Pepper-Beda's".

Most of the buildings here are thus from the second half of the 19th century and the early 20th. And most of them have now been renovated, converted and turned into freeholds, but the authentic character of the area still remains.

When the dominant company, Rosendals Fabriker (later Papyrus), was at its biggest it employed more than 1000 people, and a total of 2500 people lived in the area.

While working conditions were difficult, many social functions were introduced – as was the custom in the industrial communities of the era – at the initiative of the major owners such as David Otto Francke and Samuel Norberg.

Kvarnbyn was therefore its own, well-functioning society with workplaces, homes, shops, schools, a hospital and town hall.



#### Traces in the rapids

The earliest mills were powered directly by the flowing water. This propelled the mill wheel which drove the large millstones round. For that reason, the mill had to be built right next to, or over, the water.

Sometimes wooden or stone flumes were built to divert the water. Another possibility was to build dams with floodgates in order to make the flow more even. When old buildings had served their time, they were replaced with new ones on the same plot. Remnants of foundations, dams and footbridges could be left or else were incorporated into the new building. This process continued over the centuries.



Photo: Torsten Bundsen

Techniques developed, but the principle remained the same. That's why we can still see how the water runs into the buildings upstream and back out again downstream, just as it did in the past after depositing its power in the basement turbines.

We can also see remnants of old construction in the rapids themselves, along the water's edge, and in building foundations.

#### A cultural heritage of national interest

Because of its considerable value in terms of cultural heritage, Mölndals Kvarnby has been classified as an area of national interest for cultural resources management.

The mighty rapids have been used for large-scale powering of mills ever since the Middle Ages, and traces can still be seen of the earliest stages of Mölndal's development as an industrial area.

There is, for example, a cluster of well-preserved industrial and residential buildings from the industrial revolution during the latter half of the 19th century. The area was very significant for the early industrial development of the Gothenburg region.

# If you want to know more

Visit the Museum of Mölndal to find more information about the big industries along the rapids. The museum also has a replica of a worker's home from the early 20th century.

The Mölndal Local Heritage Association's (Mölndals Hembygdsförening) museums also illustrate life in Kvarnbyn.

For information about sights and activities in Kvarnbyn, contact the Museum of Mölndal.

#### **Contact**

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#### Hours:

Tuesday - Sunday, 12.00-16.00 Thursday, 12.00-19.00

Free entrance



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