

The River, Mills, and Reservoirs - An Engineered Power System for the Hazards, Rodmans, and Robinsons

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Peace Dale has always piqued my interest, because it is one of the most unusual, fully formed creations of the industrial era in Rhode Island

It is a remarkable place, and I have always been touched by it. Professor William Jordy of Brown University has said that it is “one of the country’s most outstanding examples of a created landscape from the industrial era”. He was right on the money, and the more I look at Peace Dale, the more true that statement becomes.

The Saugatucket River valley is not a large one, but it has a remarkable amount of industrial development. The Hazards, Rodmans and Robinsons had to overcome a number of serious engineering difficulties to harness its power in order to build and expand their textile manufacturing.

Peace Dale village is distinctive for several reasons. It is isolated enough from the surrounding forms of development to give a sense that you are entering a special place, unified by architectural expressions of the mills, the civic buildings and mill-related housing. The greenness that one sees from an aerial view of today tends to blur the fact that the village was a giant productive machine with the factories surrounded by the residences of the workers and the institutional facilities that made the village viable and complete. This productive capability is what gave Peace Dale its reason for being and what allowed it to grow. The Peace Dale of today is very far removed from the time when all of the people who lived in the nearby houses walked through the gates of the factory at sunrise and walked out late at sunset

It all began with the waterfall. While the Hazard family gave Peace Dale its name, it was founded somewhat earlier with the construction of a water powered country mill. From the eighteenth to the early nineteenth century there were one or two mills standing on the original Peace Dale site, a grist mill, a pulling mill and a linseed oil mill in probably two, maybe three separate structures. These all served the needs of the surrounding agrarian population, with people mainly living off the products of the land.

The power of falling water is what made the mill site important. A fully developed mill might have only provided 5-12 horsepower at the time, but this was still a tremendous way to magnify and go beyond human and animal power to get mechanical energy.

Water supply and water drop are two key factors engineers took into account in making improvements to get the most energy out of the river.

When Samuel Slater began his first mill in 1793 it was used for spinning cotton. However woolens were the primary fabric of choice for rural people in New England since they raised the sheep and spun that wool to weave cloth by hand. One of the first mechanized processes for textiles was the carding machine, which eased the painstaking process of carding the coarse wool to get it in nice orderly rows and make it easy to spin. These machines were the first to show up in the country side, and it could fit very easily into the homespun production cycle.

One of the first carding machines in the country was acquired and set up in 1804 in a building along side the Peace Dale dam. From this initial service, the operators of the machine decided to get involved in spinning wool and weaving the cloth. Rowland Hazard became interested in this idea. He bought a partial interest in this carding machine, eventually acquiring a total interest in 1812, and then buying a spinning machine. This was a major breakthrough, but still relied on hand weaving, which did not produce a uniform product. By 1832, Peace Dale became big enough to get on the South Kingstown map with a population of about 30 people. The Hazards had finally adopted weaving into their operations, however in 1844 the entire complex burned down.

The Hazards were anxious to recover from this crisis but decided to take advantage of the new technology that was becoming available. In a very bold move they redesigned the water power system and built a whole new mill complex out of stone, and moved into a whole new product line, woolen shawls. This was a higher quality product than they were making before. It was finally completed in 1847 and they incorporated themselves into the Peace Dale Manufacturing Company.

The waterfall of the Saugatucket was moved several hundred feet down a sluice to the new power wheel house. This was in turn made possible by creating a reservoir out of what had been known as the Fresh Meadows, which farmers prized as an important grazing area, now Indian Lake Reservoir. This made it possible to keep a continuous flow of power during dryer summer months. Without this continuous flow the mill would have to be shut down periodically, creating a serious problems for the workers and their families.

Mills were constructed throughout the Saugatucket watershed. A small woolen mill was located in the second half of the 1800s in Mooresfield, where today Route 138 crosses the Saugatucket. The pond can still be seen there. About 20 people worked there. Rocky Brook also supported a mill at Asa Pond. Rodman bought up a number of mills along this branch of the river to create another mill. Four mills also existed on Rocky Brook, employing up to 70 people. The Wakefield Mill was also important and the Robinson Factory, also a woolen mill, operated into the 20th century.

The next generation of Hazards expanded the Peace Dale Mill complex further in the 1860s and 1870s. This was made possible in part by the addition of the reservoir in Indian Run. At first glance, it seems that the reservoir would benefit the Robinsons, who were located below the Peace Dale waterfall, however a channel had been constructed to

drain the water of Indian Run into the Peace Dale Reservoir through what is now Old Mountain Field. This has since totally disappeared. Indian Run never powered a mill directly.

In addition to the addition of the reservoirs, there was a shift from the water wheel to cast iron turbines that permitted expansion of the mills. The turbines were attached to flywheels that had belts to transfer the power to the operations overhead.

In 1872, the Peace Dale Mill shifted to a new product line, worsted wool, which required a significantly more advanced spinning technology to use long woolen fibers. This permitted moving beyond shawls to other types of woolen garments, for which they won prizes in international product fairs. Toward the end of the century a new weaving factory was constructed that was strong enough to support the active machinery, which could shake a building apart. The mill complex reached close to its present scale by 1899.

The Hazards had outgrown the Saugatucket River by the 1870s, so they installed a steam engine to power mill operations. The Narragansett Pier railroad was constructed in 1875 to bring in the coal needed to operate the steam plant. Steam power was available year round, however given its cost it augmented the water power rather than replaced it.

The steam was also used in finishing processes, and gas produced from the coal was valuable in illuminating the mill complex, especially in the winter. A gasometer was built to store the gas, similar to the large natural gas storage tanks that help regulate the supply of gas in the Providence area.

The village surrounding the mill complex grew considerably. Workers arrived by foot each day and had to live close by to assure that they arrived to work on time.

One of the distinctive aspects of the Hazards was their approach to development of the community. Unlike most mill owners, they planned from the beginning to create what they felt was a comfortable and familiar kind of village, not the more typical regularized, regimented settlement. Single family, well spaced homes were built along existing roads. Today Peace Dale feels very cozy, and we do not think of the residences as company built mill housing. Peacedale is very atypical. Rowland Hazard is credited with the L-shaped 1 ½ story design, that was not the uniform rows and blocks found elsewhere.

The Hazards were also pioneers in profit-sharing for workers, based upon similar practices in some mills in England.

A key factor in why Peace Dale is such an important exception to typical mill village development is that the Hazards lived in the village close by the factory in Oak Woods. This proximity undoubtedly influenced the decisions they made as the village grew. They also paid careful attention to the landscape. As the industrial aspects of Peace Dale recede, it is perhaps their contributions to the design of the village landscape that will most endure. Charles Elliot, one of the nation's most gifted landscape architects, helped

to realize and improve their basic plan. Some of these features can still be seen in the Oaks subdivision. Elliot was also responsible for the landscaping of the sluiceways that brought water from the dam.

For example, if you stand at the Lily Pads complex, and you look across at the Worsted Mill, you see enormous banks of rhododendrons and a very pretty river valley. The mill and the house are linked by a very finely developed landscape. The Congregational Church is another feature that contributes to the village. It was designed by Rowland Hazard II. The Hazard School is another example of this design legacy. The Peace Dale Library, built at the close of the 19th century, is perhaps one of the finest buildings in the state. Peace Dale looks like things have always been here, that buildings just sort of grew out of the ground. It took great skill to achieve this effect. The Peace Dale Guild building, dating from the beginning of the 20th Century, and the Peace Dale Green, was another example of an institution that helped Peace Dale function as a community through recreation.

The beautiful memorial at the entrance to the library, *The Weaver*, sculpted by Daniel Chester French and commissioned by Caroline Hazard, is dedicated to the story of the early weavers. It was falling water that allowed for expansion of textile manufacturing that occurred here, and it helps explain why it occurred here. But we should not forget that it was the people, and the machinery of the mills that turned that falling water into products that gave money to enable the village to grow and enable the Hazard Family to amass the wealth that enabled them to create this gem of a village.

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