

Breakwater Wharf Encasement Hant's Harbour, Newfoundland

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ABSTRACT

Hant's Harbour, a small fishing community located on the southeast side of Trinity Bay on the Bay de Verde Peninsula, was settled by four English families in the 16th century to harvest the abundant codfish on the nearby rich fishing grounds. During the 17th and 18th centuries, because of the abundance of codfish, Hant's Harbour's population continued to grow as other English settlers and families sailed across the Atlantic and established their fishing plantations around the sheltered shoreline of the harbour.

In 1929, the Janes family, a well-known family in the community, established the first commercial small fish processing operation on the northeast side of the harbour, near the entrance and partially sheltered from the strong northerly and north easterly winds that blew directly into the harbour. As fishing activities expanded and a variety of species were being harvested, a larger processing facility and harbour structure was needed to accommodate larger fishing vessels and additional fishing enterprises. As a result, more protection and a larger sheltered berthage area became necessary and thus the need to construct a breakwater structure near the entrance to the harbour to protect the fishing boats and those involved in the fishing industry. As the fishing industry continued to expand and the protection of the harbour improved, flotillas of tourists and fishermen traveling within the Trinity Bay area also began using the port for overnight accommodations and as a safe haven during stormy and inclement weather.

In the late 1990's and early 2000, the first breakwater structure was built near the entrance to the harbour. However, due to destructive wave action caused by large storms, the breakwater soon needed repairs and upgrades. In 2008, with funding assistance from Federal Fisheries and Oceans Canada, a Small Craft Harbour Funding Project was approved and work began on the upgrade of the breakwater and repairs to the existing infrastructure around the wharf to increase the protected berthage and to meet the operational requirements of the facility users. After Hurricane Igor swept across the eastern portion of the province in September 2010, leaving a trail of disaster and destruction, additional repairs and upgrades were needed to the breakwater. This repair, upgrade and expansion project also involved the construction of a floating wharf and a marginal wharf along the leeward side of the breakwater.

The following paper will focus on the need to enlarge the breakwater and boat basin in order to protect the fishing facilities and fishing vessels, a brief description of the project that was funded through the Federal Government, the economic benefits associated with having a sheltered harbour in a rural community, and the work that was required after the damages caused by Hurricane Igor in September 2010.

1 INTRODUCTION

The small fishing community of Hant's Harbour, with a population of 400 people, is located on the Bay de Verde Peninsula on the southeast side of Trinity Bay, approximately 150km from St. John's, as shown in Figure 1 below.



Figure 1: Map of Hant's Harbour Location
(Source: www.mapquest.com)

Historical records indicate that the earliest settlers to live in the community of Hant's Harbour occurred around 1697 when four families sailed from England to fish for codfish that were abundant on the fishing ground just outside the harbour entrance and the nearby shoals. However, like many other small fishing villages in the Trinity South region, Hant's Harbour was attacked and destroyed by King William during the Avalon Peninsula Campaign. Fortunately, the attacks did not deter the settlers and thus Hant's Harbour's population slowly grew during the 18th century to a peak population of 750 in 1880, as other settlers from England made the community their home and established their fishing enterprises. Fishing archives reported that one of the famous English fishing captains, Captain Richard Whitbourne, used Hant's Harbour as one of his regular ports of call where for forty years he traded for salted fish under the sanction of the English Admiralty and shipped the fish back to England.

As more families settled in the community and more fishing enterprises were established, the harbor soon became crowded, causing more sections of the small harbor to become exposed to the stormy seas of Trinity Bay, especially when winds blew from the east, north and northeast.

2 ECONOMIC OPPORTUNITY

As the community's population flourished and the fishers prospered, Hant's Harbour became one of the well-known fishing communities in Newfoundland for its fishing heritage and shoreline scenery in the area.



Figure 2: Lighthouse on Custards Head, Hant's Harbour
(Source: Larry Tuck, Resident)

As a result, the community has provided many economic opportunities for its residents, as well as residents in many of the neighboring communities in the area. One of the first fish processing companies in Newfoundland, located in Hant's Harbour, P. Janes and Sons Ltd. (Janes'), has provided seasonal employment opportunities for many area residents. The company has provided one of the main sources of employment and economic development in the local area and when combined with the revenue generated from tourism, Janes' has helped to support and sustain other local businesses, thus helping to maintain stability in the population in this region of the province.

2.1 P. JANES AND SONS Ltd. (Janes')

Pleaman Janes established the first commercial salted cod fish processing operation in Newfoundland in 1929. Mr. Janes' operation expanded throughout the mid 1950's and 1960's and eventually developed into the present P. Janes and Sons Ltd operations. As the fishing industry changed from the sole reliance on cod and other ground fish species, to a broader, more diversified fishery, Janes' operations evolved into a nationally known secondary processor of shellfish, such as crab, muscles and lobster, to meet the demands of the markets. Today, the Janes family operates three large seafood-processing plants throughout the province in Hant's Harbour, Salvage and Jackson's Arm, with its main plant in Hant's Harbour. The processing plant, shown in Figure 3, processes a variety of fish species and exports secondary products worldwide.



Figure 3: P. Janes and Sons Ltd, Hant's Harbour
(Source: www.pjanes.com)

However, the main species that is processed at the plant in Hant's Harbour today is snow crab. Snow crab is harvested off the northeast coast of Newfoundland in fishing zones 3K and 3L by fisherpersons from a number of communities around the province. Today, snow crab is landed in the port of St. John's or other fishing communities around the province and trucked to the plant in Hant's Harbour for processing. Not only do P. Janes and Sons Ltd. operate several processing plants around the province, they are also a fish harvester and employ a number of local residents as crew on their 20-meter longliner, Fins 'n Skins, shown in Figure 4.



Figure 4: P. Janes and Sons Ltd. – Fins 'n Skins
(Source: Captain Jeff Piercey)

Over the years as P. Janes and Sons Ltd. expanded its operations to meet the demands of the fishing industry, more and larger fishing vessels began delivering shellfish species to the plant in Hant's Harbour. As a result, the docking facilities needed to increase and more protection and a large sheltered berthage were required, thus creating the need to improve the breakwater and docking facilities in the harbour.

2.2 TOURISM

Even though Hant's Harbour is well known for its fishing activities, when the breakwater was first constructed, the harbour became a port of call for many tourists who traveled the coastline of Newfoundland and a safe haven for their sailboats, yachts and cabin cruisers. With this increased interest in seafaring tourism, coupled with the increased demand for galley and marine supplies and other docking services and facilities, other local businesses soon began to take advantage of the additional economic opportunities that would not have otherwise been created without the construction and expansion of the breakwater at the entrance to the harbour and the increased secure berthage in the boat basin. Many fishermen and tourists have had to interrupt their travels while sailing into or out of Trinity Bay and have had to seek shelter in Hant's Harbour, which is approximately midway between Old Perlican, to the northeast and Heart's Content to the southwest, when unexpected and unpredictable sea conditions have arisen.



Figure 5: Tourist Activity in Hant's Harbour
(Source: Resident Larry Tuck)

3 PROJECT DESCRIPTION

In 2008, Fisheries and Oceans Canada approved a Small Craft Harbour Funding Project for the community after a request for assistance was submitted by the Hant's Harbour Harbour Authority. This project involved the expansion and improvements to the breakwater structure and needed repairs to the existing infrastructure around the offloading wharf facilities and the small boat basin in order to meet the operational standards for small craft harbours, as well as the demands of the fishing and tourism industries.

In 2010, after Hurricane Igor caused considerable damage to several small harbours throughout Newfoundland and Labrador, the Government of Canada agreed to invest up to \$21 million to help cleanup and repair the storm damage. From this source of funding, an additional project was approved for Hant's Harbour that would cover the cost for the reinforcement of the existing rubble mound breakwater and an extension of 60 meters to the existing 168 meter structure. In addition, funding was

also approved for the construction of a marginal wharf along its leeward side of the breakwater and a floating dock in the small boat basin. In order to provide additional protection for the harbour and to help stabilize the existing breakwater structure, large armour stones were placed on the windward side of the existing structure. Approximately 11,300 m³ of armour stone, 8,400 m³ of filter stone and 17,600 m³ of core stone were placed during the repair to the existing structure and the construction of the extension to the breakwater. The armour stone for the breakwater extension displaced an additional 3300 m² of sub-tidal area. The core materials were excavated and transported via dump trucks from local quarry sources. Large armour stones were excavated from surrounding deposits of large glacial stone found on Old Perlican Barrens and Heart's Content Barrens, approximately 25 kilometers from Hant's Harbour.



Figure 6: Marginal Wharf Construction
(Source: Resident Larry Tuck)

The marginal wharf that was constructed on the leeward side of the breakwater measured 42.7 meters in length and 6.1 meter in width. This wharf helped to increase the berthage inside the boat basin to accommodate smaller inshore fishing vessels and personal watercrafts that used the facility. In addition, a floating dock measuring 28.4 meters in length was constructed and moored between the existing wharf and the marginal wharf (see Figure 7). The marginal wharf was constructed from pressure treated cribwork, a wooden fendering system and ladders, a reinforced concrete deck, treated coping and wheel guards, mooring cleats and rings, electrical and utility poles and site security lighting. The floating dock was also constructed from pressured treated materials.



Figure 7: Project Completion Hant's Harbour
(Source: Resident Larry Tuck)

4 CONCLUSION

Small fishing communities have been the mainstay of rural Newfoundland ever since John Cabot landed on the shores of Cape Bonavista in 1497 and discovered the abundance of codfish on the rich fishing grounds near the shoreline. Like many of the earlier seaside settlements, Hant's Harbour did not have sufficient coastal land available to accommodate all the fishing enterprises, nor sufficient space to provide secure shelter to protect fishing boats and fishing facilities from the strong winds and high seas that pounded the coastline. As waterfront space became crowded and safety became an issue, man-made structures, such as breakwaters, were necessary to improve the safety for the fishermen and to increase safe berthage for inshore and offshore fishing boats. Early breakwater constructions served their purpose well, however, over the years, these structures often received damages from pounding wave action and ice conditions, thus resulting in much needed repairs and improvements. Hant's Harbour was no exception.

When the Category 4 hurricane, Hurricane Igor, tracked across Eastern Newfoundland on September 21, 2010 it caused considerable damage to the existing breakwater structure in Hant's Harbour and the necessity to repair and expand the exiting structure became a reality. With funds provided through a Federal Government repair program, the community of Hant's Harbour was able to repair the damage, reinforce and extend the existing breakwater structure, and construct both a floating dock and a marginal wharf to provide additional berthage and protection for more vessels. This program has helped to sustain the fish processing industry and has created opportunity for additional economic opportunities for businesses in the community. Breakwater structures are very common throughout many fishing communities in Newfoundland and will continue to provide protection and safe havens for fishermen and tourists who use the fish processing facilities and small craft basins. Like anything exposed to the waves of the North Atlantic, breakwater structures will become damaged and thus will need continuous monitoring and repairs to protect those who depend upon them for safety and protection. The Harbour Authority in the community will continue to monitor the structure to ensure

that safety of the users is not compromised. Any repairs or additional upgrades will also be completed as funding becomes available.

5 REFERENCES

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