

Old Bonaventure harbour gets a face lift

A creative approach to dredging



Old Bonaventure is a typical Newfoundland fishing settlement with an active inshore fishing fleet. It has a small harbour with a relatively narrow entrance opening into Trinity

Bay. The three small rivers flowing into the harbour have been depositing silt and sand for centuries and the build up was now making it difficult to navigate.

The Challenge

Coady Construction was awarded the contract to dredge the harbour. Traditionally, excavators would be deployed on barges and the process of moving material from the harbour floor to



The dredging site where we can see Flygt BIBO pumps in the foreground.

dry land is a long and tedious task. Lifting the silt, gravel and rock from the ocean floor is inefficient and much of the material is spilled

from the excavator's bucket as it is raised. Transferring this material from the barge to shore and onto dump trucks meant handling is increased thus adding to the cost of the project.

The Solution

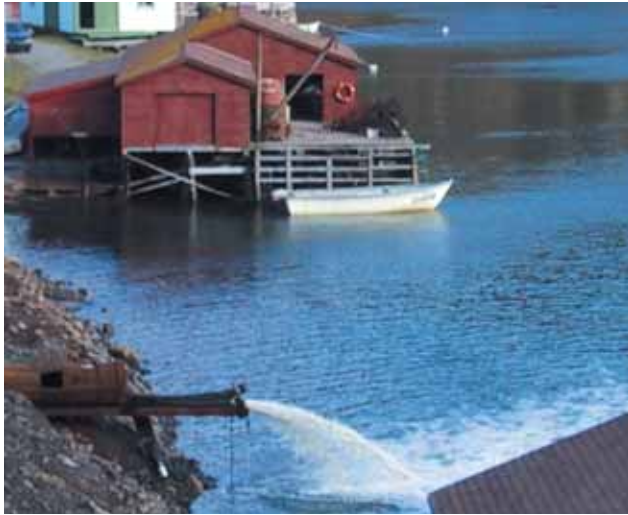
Since the mouth of the harbour was narrow, it was felt that a rock and earth bream could be built and the harbour dewatered allowing the



The Old Bonaventure wharf.

equipment to operate in the dry. This would reduce the time required to complete the project and at a lower cost. This contractor has experience with Flygt's larger BIBOs, and was comfortable with this new approach. It was estimated that a single BS-2250 MT would dewater the harbour in adequate time but two would get them into their excavators that much quicker.

With the three small streams emptying into Old Bonaventure harbour, there was a potential risk of these streams developing into rivers when there is sufficient rain fall. It was decided to have the third BS-2250 available powered by a 250 kw generator.



The discharge pipes are buried into the damn (at left).

The flows of the three streams were diverted to a common sump near the earth dam, so that all three BS-2250's could be deployed at the same location. This allowed easy control of the pumps and permitted energizing only the number of pumps that were needed to stay ahead of the incoming fresh water.

Draining the harbour meant that the sand that was being removed could be stockpiled to allow the water to drain. As a result the road trip to the land fill would remain relatively dry and clean. Also a number of rock outcrops that had been navigation hazards in the harbour could now be easily broken up with land based equipment instead of being blasted.

The creative approach taken by Coady Construction, Flygt and other partners to execute this project, allowed it to be completed well ahead of schedule and budget.



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