

## Bowmanville Underground Expansion Project

St. Marys Cement (SMC), a division of Votorantim Cimentos, is proposing to construct and operate the Bowmanville Underground Expansion Project (the Project), to be located contiguous with SMC's existing licenced quarry area situated on the shore of Lake Ontario within the Municipality of Clarington (Figure 1). The Project will extend beyond the existing site beneath the lake to extract limestone from an underground mine to be located beneath the bed of Lake Ontario. SMC is looking at alternative sources of limestone, including the underground sources associated with the Project, due to the increasing scarcity of high quality limestone occurring within certain parts of Ontario.

### Description of the Undertaking

The Project site is comprised of an underground mine as well as the existing licenced quarry area which is where the limestone extracted from the underground mine will be processed. The Project will include:

- construction of a portal from within the existing licenced quarry area;
- development of underground workings extending into an area below the bed of Lake Ontario;
- underground extraction and primary crushing;
- secondary processing within the existing licenced quarry area;
- shipment of limestone products to market using existing road, rail and/or dock infrastructure; and
- closure of the underground mine.

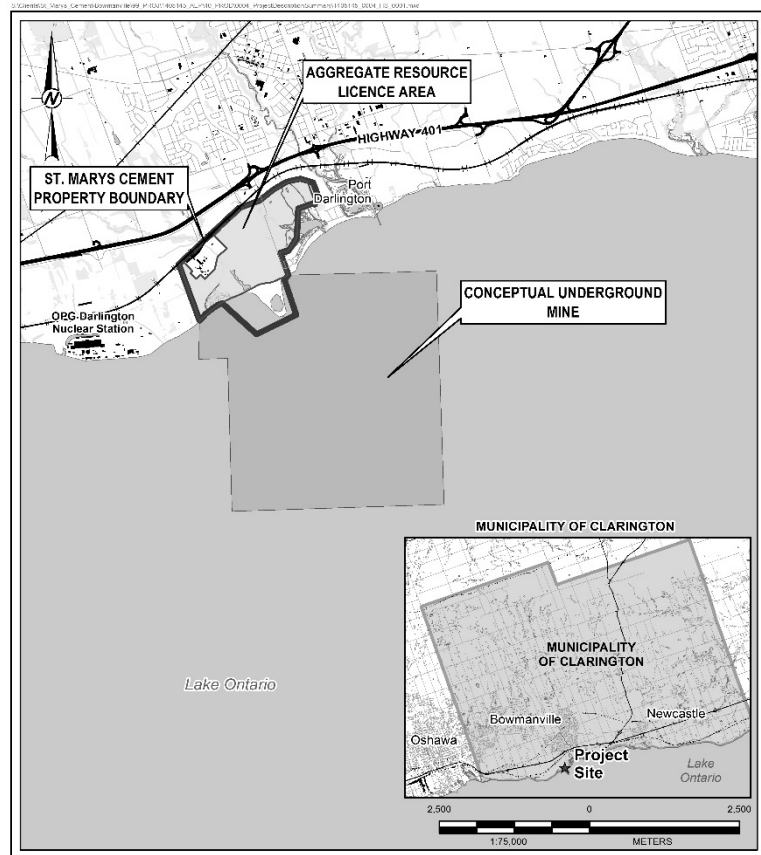


Figure 1: Project Site

Up to 4 million tonnes of limestone products per year will be extracted. The extent of the conceptual underground mine is illustrated in Figure 1. The underground extent is based on the conceptual design for the underground mine, and is subject to change based on the results of the exploration program to be conducted at the Project site. The mine is projected to operate for approximately 100 years.

The underground mine will be accessed from a portal excavated from within the existing licenced quarry area located near Bowmanville, and will not be visible beyond the quarry area. The portal will provide access to move workers, equipment, services and mined rock to/from the underground mine, and to allow for ventilation and dust control. All works will be conducted from within the existing licenced quarry area or underground in the mine, and no in-water works are contemplated at this time. The limestone extracted from the underground mine will be processed within the existing licenced quarry area; however, a portion of it may be processed separately from the existing processing activities at the site.

### **Construction Phase**

It is anticipated that construction activities will include the excavation of the mine portal, mine dewatering, and the development and installation of components of the underground mine, which include underground access tunnels, haulage roads, ventilation equipment, a conveyor, and a material crushing location. Mine dewatering and the development of required mine components will advance as the underground extraction advances. The aboveground infrastructure that will be used for the purposes of processing and shipping the underground limestone will also be set up at this stage within the existing licenced quarry area. Facilities that will be built and used for the processing of the underground limestone include a stand-alone infrastructure where secondary crushing, screening, and stockpiling will occur. Transfer facilities for shipping of the underground limestone will also be set up within the existing licenced quarry area.

### **Operation Phase**

A preliminary production schedule has been planned for a production rate of up to 4 million tonnes of limestone extraction per year, for approximately 100 years. However, it is anticipated that the rate of mining could increase as available surface resources of high quality limestone in Ontario are progressively exhausted in the future. Extracted underground material will be transported with loaders and trucks to a crusher station within the underground mine. Material gathered at the crusher station will be crushed to a size that can be transported to surface, and will be transported to surface with the use of a conveyor. Further processing of the limestone at surface will be completed within the existing licenced quarry area. All material mined will be processed for aggregate or cement products, stockpiled and sold without the accumulation of waste rock or tailings. SMC is considering a range of options for transporting the material from the mine to market, which include road, water, and rail.

### **Closure**

It is anticipated that at closure the underground mine will be left to flood over the long term. Alternate options will likely be considered as the Project progresses. The evaluation of these alternatives will be documented as part of the EA.

### **Project Approval Requirements**

The Project will be subject to an Environmental Assessment pursuant to the Ontario *Environmental Assessment Act* under the Class EA for Activities of the Ministry of Northern Development and Mines (MNNDM Class EA) process. SMC has completed a preliminary screening of the Project to determine if the Project would have any potential environmental effects, as required by the MNNDM Class EA process. Based on the potential environmental effects identified during the preliminary screening of the Project, the level of public interest identified, and discussions with MNNDM, the Project has been determined to be a Category C project. SMC will provide Project Documentation that will meet the requirements for a Category C project under the MNNDM Class EA process, as well as the application standards for a Category 2, Class "A" Licence Requirements under the *Aggregate Resources Act*, as requested by the MNNDM. Consultation and engagement activities will be completed for the Project as per the requirements of both the MNNDM Class EA process and the *Aggregate Resources Act*.

Project environmental permitting planning and associated studies will be carried out concurrently with the Class EA process. This includes exploration activity permitting, closure planning and the Mining Rights Only lease application. Permits for the Project will be obtained, as needed, based on regulatory requirements and consultation with the pertinent regulatory agencies.