

SOREL SOUND WALL
SOREL-TRACY, QUEBEC, CANADA

Slope Protection

Problem

Sorel-Tracy is a small town located on the south shore of St. Lawrence River, roughly 75 km east of Montreal. The town has been home of Rio Tinto, Fer et Titane (RTFT) for many years.

The RTFT is a big complex (with a capacity to produce more than one million tons of titanium ferrous slag annually), and is recognized around the world as the key supplier of titanium dioxide pigment; a compound used in paints, plastics, textiles and papers. Due to the nature of the facility, the residents of Sorel- Tracy have lived with noise and pollution issues.

RTFT was looking for a permanent, safe, efficient and cost effective solution to solve the noise and pollution issues for the residents of Sorel-Tracy.

Solution

In order to facilitate RTFT's requirements, Maccaferri proposed Green Terramesh (city side) and Terrawall System (plant side) as the most appropriate solution.

In order to reduce the sound 7.5m high and 64m long sound wall was required.

Green Terramesh was installed on the city side of the structure at 60° using MacGrid® WG woven polyester geogrids as primary reinforcement within the slope. This proposal was selected as offering the optimal balance of value and function, meeting the clients objectives, including the vegetating slope face.

The Terrawall System was installed on the plant side of the structure at 84° using MacGrid® WG woven polyester geogrids as primary reinforcement . This proposal was selected for it's ability to use the available recycled crushed concrete from the plant.

MacGrid® WG series geogrids are used predominately in Mechanically Stabilized Earth (MSE) and Reinforced Soil Slope (RSS) structures. MacGrid® WG geogrids are made from high molecular weight, high tenacity polyester multifilament yarns. The yarns are woven under tension in the machine direction and finished with a polymeric coating. MacGrid® is engineered to be mechanically and chemically durable, and resistant to biological degradation.

Client: Rio Tinto, Fer et Titane (RTFT)
Designer / Consultant: Maccaferri Canada Ltd.
Contractor: A. & J.L BOURGEOIS LTEE
Products used (Qty.)
 - Green Terramesh 64M
Date of construction: 11/2016 - 12/2016



Aerial view of the Rio Tinto Facility, Sorel-Tracy, Quebec



Recycled crushed concrete used for face-filling



Completed city-facing side using Green Terramesh



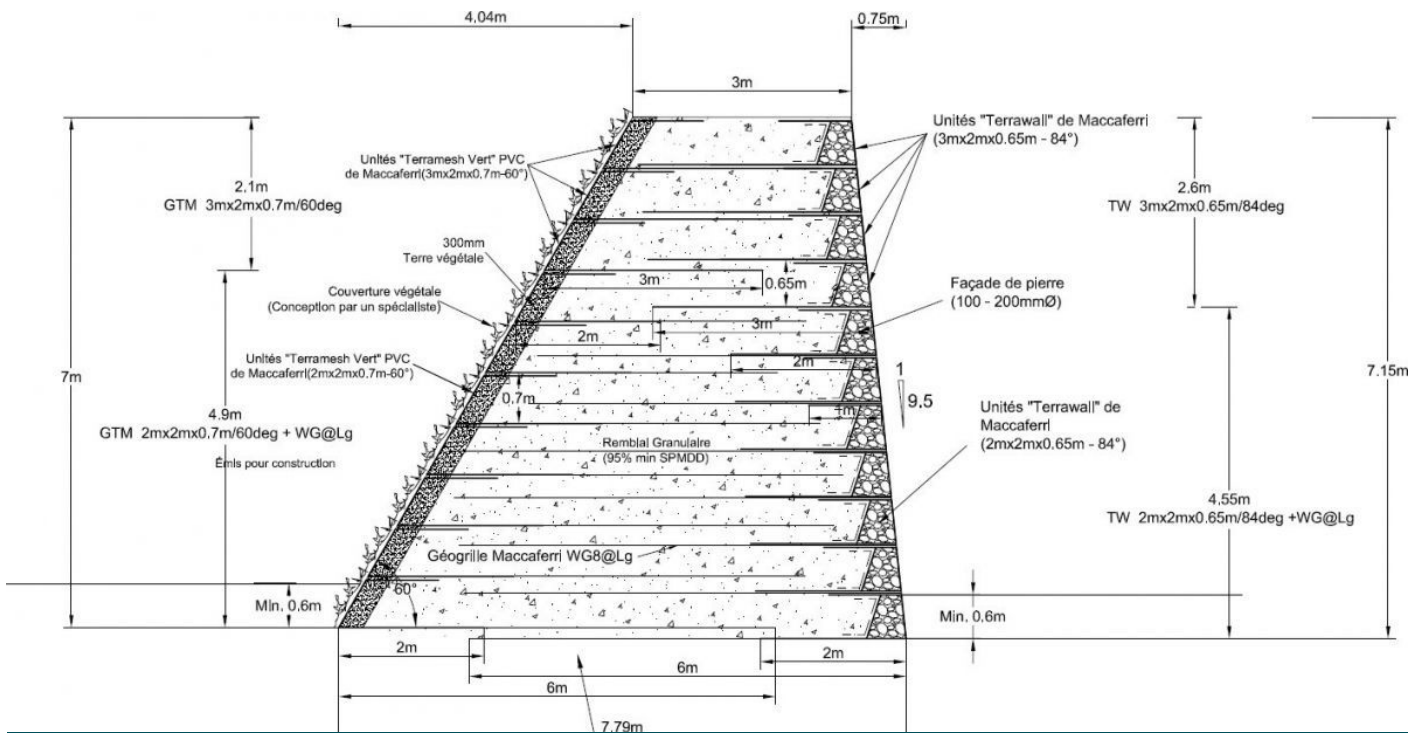
Aerial view of the land before construction



Aerial view of the completed project



Close-up of sound wall



Cross Section of Rio Tinto Sorel Sound Wall