

SOUTH SHELL PARK



BACKGROUND:

In 2008, the Town of Oakville adopted an official plan known as “Livable Oakville”, which emphasized the use of stormwater management practices in new developments to control both the quality and quantity of runoff. The plan also encouraged the use of permeable surfaces and soft landscaping wherever possible. South Shell Park was selected as a pilot project to support the implementation of these sustainable design objectives.

To meet these goals, the Town implemented a permeable pavement system in the park's parking lot. Cosburn Giberson Landscape Architects (CGLA) designed the lot using Unilock Eco-Optiloc® pavers in Terra Cotta. This paver was well suited for the project requirements, as its large joints allow water to rapidly infiltrate into the subbase. The unique “L”-shaped design also performs exceptionally well in heavy-duty applications, providing superior interlock and stability under vehicular loads.

Installation was completed in 2009 and the permeable system performed as intended, successfully reducing surface runoff and minimising strain on the municipal storm system for many years.

LOCATION:

Oakville, Ontario

DESIGNER:

Cosburn Giberson
Landscape Architects &
The Town of Oakville

PRODUCT:

Classic - Eco-Optiloc®
in Natural



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CHALLENGE:

After 17 years of heavy use and exposure to harsh Canadian winters, the paver joints became clogged, reducing the permeability of the paving system. This was primarily caused by repeated sanding and salting to manage ice buildup during winter months.

The Town made several attempts to restore the system's performance; however, these efforts were ultimately unsuccessful. With regular maintenance to address joint clogging, this issue could likely have been avoided. Like all permeable pavement systems, ongoing maintenance is essential. Over time, sediment and debris can accumulate in the joints, reducing the system's ability to infiltrate stormwater. As a result, preventative cleaning is critical to maintaining permeability.

SOLUTION:

Remaining committed to the principals of "Livable Oakville", the Town initiated a rehabilitation project to replace the existing system and restore its functionality.

The Town partnered closely with CGLA and Unilock to conduct a comprehensive review of the site and identify an effective solution. The assessment confirmed that while the initial design performed well for many years, the repeated application of sand and salt during winter months, had impacted the permeability of the system. Recognizing these conditions as a critical design consideration, the project team prioritized a solution that would not only restore infiltration performance but also improve the long-term ability to maintain the paving system under real-world conditions.

Based on these findings, Unilock recommended DuraFlow® pavers. This paver was specifically selected for its innovative design and ability to address the key challenges experienced at the site. DuraFlow features patented openings called "cupules". These engineered openings are designed to allow rapid water infiltration while also allowing for more effective removal of debris during routine maintenance. This means that sediment and material buildup can be easily managed using standard street-sweeping equipment.



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In addition to the permeability and maintenance advantages, DuraFlow pavers are also “L” shaped, like the original Eco-Optiloc pavers, ensuring exceptional interlock and durability. This makes it ideal for this project which is subject to vehicular loads and frequent traffic.

The redesigned parking lot delivers both environmental and operational benefits. The project restored the parking lot’s ability to effectively manage stormwater on-site, reducing runoff and relieving pressure on municipal infrastructure, while also providing a practical maintenance approach for the town. The Town was pleased with the outcome and looks forward to seeing the project perform successfully for many years, while continuing to implement solutions that support the vision of a “Livable Oakville”.

“ The result is a win-win for the municipality: a system that meets environmental and council goals while remaining practical to maintain. ”

- Max Lazo
Cosburn Giberson
Landscape Architects

