

Transformed Army Base is a Model for Sustainable Residential Communities

Project: Currie Barracks

Location: Calgary, Alberta, Canada

Owner: Canada Lands Company

Approving Agency: City of Calgary

Product: Stormceptor®



The Canada Lands Company's* (CLC) new residential community on an abandoned military base has tapped Imbrium to play a key role in making this Low Impact Development (LID) initiative a model of sustainability. Currie Barracks, a 200-acre (81 ha) project in Calgary, is the largest site to date to earn Gold certification from the LEED for Neighborhoods rating system, an internationally accepted standard for high performance in green design and construction.

As part of the sustainability initiative, 10 Stormceptor units were installed in Currie Barracks to lessen the development's stormwater footprint, giving Currie Barracks a more sustainable response to rainwater runoff. Stormceptor systems are recognized for their performance by the City of Calgary in concordance with its endorsed principles of smart growth and sustainability. Stormceptor licensee Lafarge manufactured each of the Stormceptor units, each uniquely configured to meet site conditions.

At Currie Barracks, Stormceptor units remove high levels of fine sediment (TSS) from stormwater before entering an underground storage systems that capture runoffs and allows it to infiltrate into the ground. The Stormceptor units provide the necessary treatment needed to prevent siltation of the infiltration system and mitigate maintenance, and are thus essential to the performance of the infiltration system. In addition, the units remove hydrocarbons and other toxins from the runoff, to protect groundwater as well as streams and local lakes from contamination.

Treating stormwater (urban) runoff is a critical issue in major centres like Calgary, as stormwater in the region travels to source waters used for drinking and recreation – and which are a natural habitat for a diverse range of aquatic species. Sediment and associated pollutants in stormwater can quickly overwhelm downstream storm sewer capacity and threaten water quality.

Because Currie Barracks is being built in the midst of several older developments, planners needed to leverage the new development to control stormwater pollution as much as possible in the region.

The medium-density development includes a retail area (High Street), public green spaces that include a heritage precinct (Parade Square), and residential units serving a diverse population. Other elements of the CLC's development plan include bioretention areas with bioinfiltration cells and the infiltration underground storage system that works in tandem with Stormceptor Stormceptor to provide a high level of treatment, removing pollutants prior to infiltrating the clean water back into the ground water table. As well, mature trees are being preserved and planted and numerous nature areas are designed to complement this pedestrian and bicyclist-friendly community. Residential units are under construction and will open in the fall of 2010.

*The Canada Lands Company is an arms length, self-financing Crown Corporation that reports to the Government of Canada.