



CASE STUDY

On-Site Stormwater Detention with Brentwood StormTank®

LOCATION: Surrey, British Columbia

PROJECT TYPE: Product Supply, and Installation

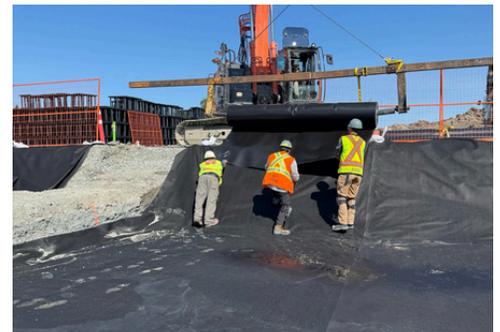
PRODUCT USED: Brentwood StormTank®, 40mil LLDPE, TE-6 Non-Woven Geotextile, TE-8 Non-Woven Geotextile



CHALLENGE:

The New Surrey Hospital and Cancer Centre required a high-capacity stormwater detention system capable of storing and slowly releasing water during major storm events without increasing the load on municipal infrastructure. The site's low elevation and high water table eliminated infiltration options, making a fully lined detention system essential for long-term performance.

Compounding the challenge, the project required more than 1,200 m³ of storage within a constrained footprint. Civil and structural limitations drove an irregular Storm Tank layout, increasing constructability risk—particularly for liner fit, seam detailing, and penetration sealing. Installation also occurred in cold seasonal conditions, where liner handling and welding tolerances tighten. With alternatives explored but redesign risk unacceptable, the team needed a proven, engineer-specified solution delivered on schedule.



TITAN SOLUTION

Titan collaborated with Fraser Health, Aplin Martin, EllisDon, Jacob Bros, and Emco Waterworks to provide a complete lined detention package. Titan supplied the Brentwood StormTank® system specified by the engineer, protecting schedule certainty while leveraging StormTank's configurability to achieve high storage volume in a complex footprint.



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▶ TITAN SOLUTION CONT'D

To address groundwater conditions, Titan installed an impermeable LLDPE liner system. A non-woven geotextile cushion layer was placed over the prepared subgrade, followed by liner rollout and precision seam welding tailored to the irregular geometry. A second protective geotextile layer was installed above the liner before module placement.

Jacob Bros pre-assembled and installed StormTank® sections into five modular systems, including two central systems set side by side to maximize footprint efficiency. Titan returned to cap the system with a liner and seal all protrusions, ensuring complete continuity and long-term impermeability. Specialized liner crews were mobilized from all over Canada to maintain quality and momentum despite cold-weather schedules.



▶ ACHIEVEMENT:

Titan delivered a flagship stormwater detention system for one of BC's most critical healthcare builds, proving execution certainty even under demanding site conditions. The completed network provides over 1200 m³ of fully lined onsite storage, delivering dependable storm control in a high-water-table environment where infiltration was not possible.



Installed across five modular systems, nearly 5000 Brentwood StormTank® modules were deployed to achieve exceptional storage volume within a tight, irregular footprint. Despite cold-weather installation and complex liner detailing, Titan's specialized crews completed a fully sealed, hospital-grade system on schedule, protecting downstream infrastructure from peak flows and preserving long-term capacity for decades of service. This project also stands as a major early win for Titan's BC branch and a benchmark for large-scale lined Storm Tank solutions in Western Canada.