Project Profile: Altaire SFU

Location: Burnaby, BC
Constructed: September 2008
Architect: Nigel Baldwin
Client: Polygon Homes

Polygon's Executive high rise community, the Altaire, is part of a larger community development within Simon Fraser University called 'Univercity'. Univercity's 160 acres was developed as a result of Simon Fraser's donation of 800 acres to the Burnaby Mountain Conservation Area. The Altaire site borders extremely steep slopes on the Northern side of Burnaby Mountain. CH2M Hill had to rewrite the tenets of urban hydrology in coming up with a storm water management plan that protected the Brunette water basin from any development effects.

Solution

Strict storm water management, erosion control plans, tree protection and native plant guidelines made green spaces a top priority at Altaire. Conventional drainage infrastructure and impervious concrete is not only very expensive but also results in pollutants running into local fish bearing waterways. The 'back to nature' geomodular retaining walls terrace the landscape, capture rain and storm water from the building and foster the growth of native plant species. The Vegetated Geomodular .25:1 slope was constructed to a total height of 5m with an overall finished face area of approximately 500m2.

Trexiana's Flex MSE facing has greater depths of growing mediums than other shear faced cage based vegetated systems, as well as greater surface area – which means consistently better vegetation results. Also, it doesn't oxidize and add toxins to any runoff. The carbon footprint of Flex MSE's 50% recycled geosynthetic facing is also dramatically less than carbon intensive steel wire and concrete systems.

Naturalized, undulating contours were easily incorporated to the wall design. Live planting was done relatively sparsely – and within two years the unirrigated wall was 100% vegetated. The Vegetated Geomodular wall now seamlessly blends with the natural environment while providing a permanent functional storm water and retaining wall solution.

Ambitious projects such as Univercity, which also incorporate LEED and Living Building Challenge sites, are ideal opportunities for Flex MSE. A base of 8-12 LEED points can be easily obtained, with an additional 10 possible if the system is developed to its full

design potential. The Vegetated Geobag based system was selected for the Altaire because of its inherent structural integrity, and innate storm water benefits. Additional benefits such as extended life span, much lower construction costs to other hard armour and flexible systems, light weight components, and aesthetically pleasing vegetated surface make it an obvious choice for sustainably minded owners.

Altaire Towers, Burnaby, BC