

UniverCity

**A COMPLETE
SUSTAINABLE
COMMUNITY
ON BURNABY
MOUNTAIN**

**SETTING THE STAGE
FOR A
STUNNING
SECOND
ACT**

UniverCity / ˌYōōnə vərˈSətē/

A complete, sustainable community on Burnaby Mountain

The SFU Community Corporation is governed by an independent Board of Directors that includes SFU stakeholders, faculty and student representatives, as well as external members with expertise in real estate development, finance, law, and other related disciplines.

As Trustee, that Board sets policy for SFU Community Trust, helping to shape the future of UniverCity.

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**THE TRIUMPHANT
EXPRESSION OF AN
IMPOSSIBLE
DREAM**



**THE GREENEST
CHILDCARE
CENTRE
ON THE PLANET**



**SETTING THE STAGE
FOR A
STUNNING
SECOND
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sus·tain·a·ble /sə'stānəbəl/

The use of natural products and energy in a way that does not harm the environment or deplete the resource

de·vel·op·ment /di'veləpmənt/

The process of converting land to a new purpose by constructing buildings or making use of its resources

UniverCity

THE TRIUMPHANT EXPRESSION OF AN IMPOSSIBLE DREAM

The dream was described in 1995 when then-president of Simon Fraser University, John Stubbs, announced an intention to build a “model sustainable community” on endowment lands adjacent to SFU’s remote campus atop Burnaby Mountain. Improbably, President Stubbs was calling for more than a community that would be “sustainable” in its own right—a goal that was far beyond the technical capacity of any 20th century developer. He was also calling for development that would help sustain his institution: he wanted to improve the standard and quality of urban planning, design, and construction; he wanted to build a “model” community without inflicting any damage to the environment or depleting the natural resources; he wanted to inject community life into the isolated hilltop campus; and he wanted to do so at a profit, creating a lasting legacy to support the teaching and research mission of the university. More than a few commentators said it couldn’t be done.

Yet 18 years later, UniverCity exists much as President Stubbs had

imagined. Today, it is a community of 3,500 people, celebrated and, increasingly, emulated for its designs and practices. It has consistently set a national—and sometimes global—standard for sustainability, most recently by completing what is expected to be the first Living Building in Canada, a childcare centre that creates more energy and harvests or recycles more water than its inhabitants use, and one that was built and is operated with non-toxic components sourced within a 500 kilometre radius. Having achieved those broad goals, UniverCity has also contributed more than \$30 million in cash and an additional \$15 million in physical benefits to Simon Fraser University, proceeds that support teaching and research in such diverse fields as bioinformatics, chronic disease, and climate change.

The SFU Community Trust

The vehicle for this success has been the SFU Community Trust, a wholly owned community corporation that SFU established in 1997 to oversee planning and development of UniverCity. In addition to the environmental and economic goals

already stated, SFU also directed the Trust to create a complete community that complemented the function of the university.

That was a challenge and an opportunity. SFU’s original campus is in the geographic centre of Metro Vancouver, but it sits on the peak of Burnaby Mountain, surrounded by an undeveloped extensive conservation area. Before the development of UniverCity, SFU staff, faculty and most of its students were forced to commute daily from elsewhere in the region, leaving the isolated campus an evening and weekend wasteland. Students who lived in residence also had to commute, in reverse, for off-campus entertainment or for necessities beyond those available in the university cafeteria. A community on the mountain, with a complete selection of homes and services, had the promise of providing nearby accommodations and improving the quality of life for all those who work or study at SFU.

Acting first on its sustainability goals, SFU began by allocating more than 80 percent of the property (320 hectares) to the Burnaby



“...when you build a thing you cannot merely build that thing in isolation, but you must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and the thing which you make takes its place in the web of nature, as you make it.”

CHRISTOPHER ALEXANDER, “A PATTERN LANGUAGE”

Mountain Conservation Area—in return for the right to develop 4,500 units on the remaining 65 hectares. This guaranteed that UniverCity would have a small environmental footprint, primarily on land that had already been disturbed by campus development. It also contained development to an area that would be easily walkable, close to the campus and clustered conveniently around services and public transportation.

But SFU President Stubbs called for more than a good or even a highly functional community. He promised

a “model of sustainability.” Even on a small footprint, it would still be a challenge to build a community of 10,000 people without damaging the environment or depleting the total resource.

The Trust began by setting the highest possible standards for construction, developing green building guidelines specifically for local conditions. Then, it worked with the City of Burnaby to enshrine those standards in one of the most ambitious green building bylaws on the continent. Today, all UniverCity structures must be 30

percent more energy efficient and 40 percent more water efficient than the Model National Energy Code for Buildings. The Trust can also offer higher density to developers that achieve energy efficiency 45 percent higher than the MNECB or provide enhanced stormwater management features.

In addition to its environmental element, “sustainability” also has social and economic components. Socially, a sustainable community must provide the services and amenities that its residents require.

At UniverCity, that meant a High Street where residents and SFU students, faculty, and staff could buy the necessities of day-to-day life. Critically, that includes a grocery store, Nesters Market, which opened in 2010. The two mixed-use buildings that now delineate the south side of University High Street also include coffee shops and restaurants, a bank, a travel agency, a print shop, a hair salon, a dentist, two spiritual organizations and a dollar store.

The Trust also worked with the provincial government and the Burnaby School District Board of Education to open the University Highlands Elementary School in 2010. This was a boon to homes with young children, which comprised only 20 percent of UniverCity in 2007, but 41 percent today. Every UniverCity resident is now a five to seven minute walk from school. Thanks to its reputation and convenience, University Highlands Elementary also attracts more than a third of its students from off mountain, another great convenience for parents who work or study at SFU.

With its first phase completed and the second and third phases well underway, UniverCity is now home to 3,500 people, living in 1,595 units among 13 buildings. Phase 1 buildings, in the East Highlands, range from four-storey, woodframe multi-family residences to 12-storey concrete buildings—many of which have received awards for everything from environmental achievement to innovative financing.

In response to demand for a more urban component close to the High Street and campus, the Trust negotiated with the City of Burnaby to transfer some of the density that had been planned for Phase 4 into Phase 3 in the West Highlands. The resulting buildings, which will be up to 20 storeys, include smaller units that are perfect for first-time home buyers, even as they take advantage of the high-value, 360 degree views—urban and natural, ocean and mountain.

The density transfer also answered demand from some of UniverCity's expanding families. Now with a lower density, the Phase 4 Slopes neighbourhood will feature some larger, family-friendly, ground-

oriented homes. Working toward a population between 8,500 and 10,000 residents in as many as 4,500 units, the ultimate UniverCity density will be roughly 150 people per hectare (62 people per acre)—comparable to less than Vancouver neighbourhoods such as Yaletown (76 people/acre) or the West End (78 people/acre); more than the Yonge and Bloor neighbourhood in Toronto (54 people/acre); and similar to the Plateau in Montreal (66 people/acre).

Economic Sustainability

UniverCity has also delivered, significantly, on the third component of sustainability, economic. All development properties have been leased for 99 years rather than sold outright, guaranteeing a perpetual benefit to the university. Thanks to a blue-chip group of developers, UniverCity has also been able to offer homes with an enviable environmental performance at a price that is competitive with conventional suburban competitors. For example, while prices in North Vancouver average \$625 per square foot, and range as high as \$900 per square foot in the similar development on the

Point Grey campus of the University of British Columbia, UniverCity's average purchase price has been \$450 per square foot, comparable to nearby neighbourhoods such as Coquitlam and Port Moody. Accordingly, new developments have sold briskly, even during the post-2007 downturn period, and bidding remains competitive each time the Trust makes new parcels available to lease.

The result is a community in which nearly half of all households (47 percent) have some affiliation with SFU and more than half of all residents (52 percent) walk or take transit to work and 41 percent of UniverCity

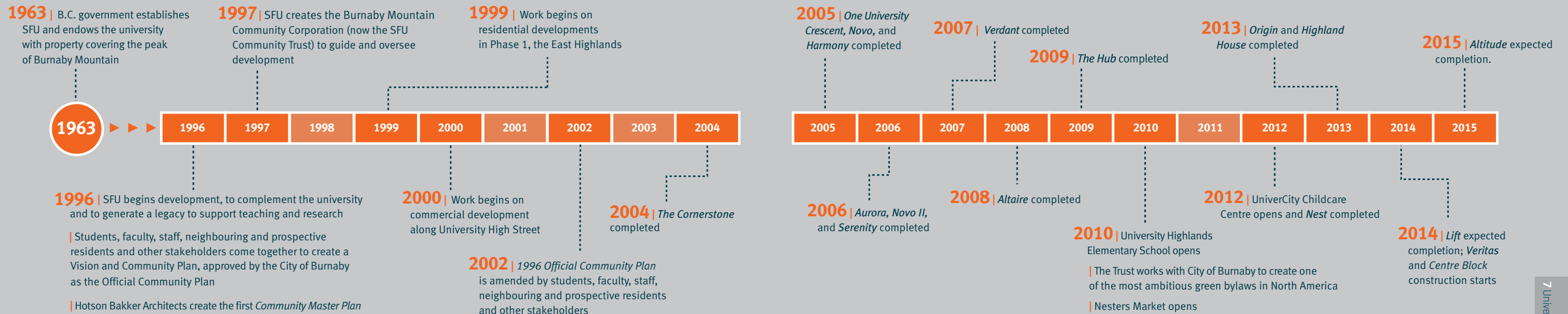
households have school age children. Although a neighbourhood with urban-level density, one of the most frequent reasons given for moving to UniverCity is the natural environment. The mountaintop community is surrounded by a protected area more than twice the size of Manhattan's Central Park and boasting 28 kilometres of hiking and cycling trails. Residents are also a short walk to all the educational and cultural offerings of SFU, and receive special access to the university's fitness facilities.

The SFU Community Trust is proud to have taken a leadership position, and honoured that its per-

formance has been recognized by organizations such as the Prince's Foundation for Building Community and the International Living Future Institute (*see story, page 15*). It is particularly gratifying to have a childcare centre that expects to be designated as Canada's first Living Building (*see story, page 8*)—to prove that a truly sustainable project is environmentally possible, socially desirable and economically practical. But we are not satisfied. The challenge will be to translate the potential of a Living Building to a Living Community (*see "Setting the Stage for a Stunning Second Act," page 22*). ■



UniverCity TIMELINE



su·per·la·tive /sə'pɛrlətɪv/

Of the highest quality or degree



THE GREENEST CHILDCARE CENTRE ON THE PLANET

“It’s always risky to stand up and tell everyone that you’re going to be the best at something,” says SFU Community Trust President and CEO Gordon Harris. “You know it won’t be very long before people turn around and say, ‘The best? Really? Show me.’”

At which point, Harris can now point to the UniverCity Childcare Centre, the single most successful project in a community development exercise that is winning international renown for sustainable practice. The UniverCity Childcare Centre is expected to be certified as Canada’s first Living Building—a building that generates more energy and harvests or recycles more water than

its inhabitants consume, and that was constructed from, and will be operated with, non-toxic materials sourced from within 500 kilometres. To meet the Living Building standard, any carbon dioxide generated in the construction or operations will also be offset, in perpetuity. On its opening day, in April, 2012, it was Jason McLennan, CEO of the International Living Future Institute and author of the *Living Building Standard* who called it, “the greenest childcare centre on the planet.”

“Creating this building was a signal accomplishment for the SFU Community Trust,” says President Harris. “One of our primary mandates at the Trust is to create a model

sustainable community that brings international acclaim to SFU and to the City of Burnaby. And in our mind, ‘sustainable’ is not a relative term; it’s an absolute. We’re not satisfied with an environmental performance that is ‘pretty good’ or ‘better than the market.’ We’re dedicated to building a community that won’t reduce the resource wealth available for future generations. The Childcare Centre proves that’s possible.”

Even better, the centre was built for 18 percent less than comparable projects being built in the region at the same time.

“That was a big win,” Harris says. “Sustainability is an economic as

well as an environmental concept and we at the Trust are always conscious of our primary mandate—to generate endowment wealth for Simon Fraser University. So, we were extremely proud to build the childcare centre not just within the budget that we had set aside for a conventional building, but for 20 percent less.”

This was a major departure from the first proposal, which called for a conventional childcare centre to be placed on the top floor of a planned six-storey parking garage. But when the Trust realized that the parkade was neither economic nor necessary, Director of Development Dale Mikkelsen suggested that the Trust attempt a Living Building instead.

The Living Building Challenge

As a board member of the International Living Future Institute, Mikkelsen is well-versed in the Living Building Challenge. Unlike systems like LEED® (Leadership in Energy and Environmental Design), which set prescriptive standards, the Living Building Challenge is purely performance based. The organizers establish performance standards in six categories: Site, Materials, Energy, Water, Indoor Quality, and Beauty + Inspiration. Then the Institute inspects the building and its operations during its first year to see how it measures up.

“It’s an approach that encourages innovation,” says Mikkelsen. “Instead of being limited in your choices, you get to decide how to achieve the best performance in every category.” For example, instead of telling you what

kind of heating or cooling systems meet the standard, the International Living Future Institute checks the energy bills once the building is operating. In this instance, the Trust chose to install a rooftop solar thermal array that generates enough energy for heat and hot water for the centre and a considerable surplus that can be sold back to the UniverCity District Energy System, offsetting the electricity that is still needed to operate the building.

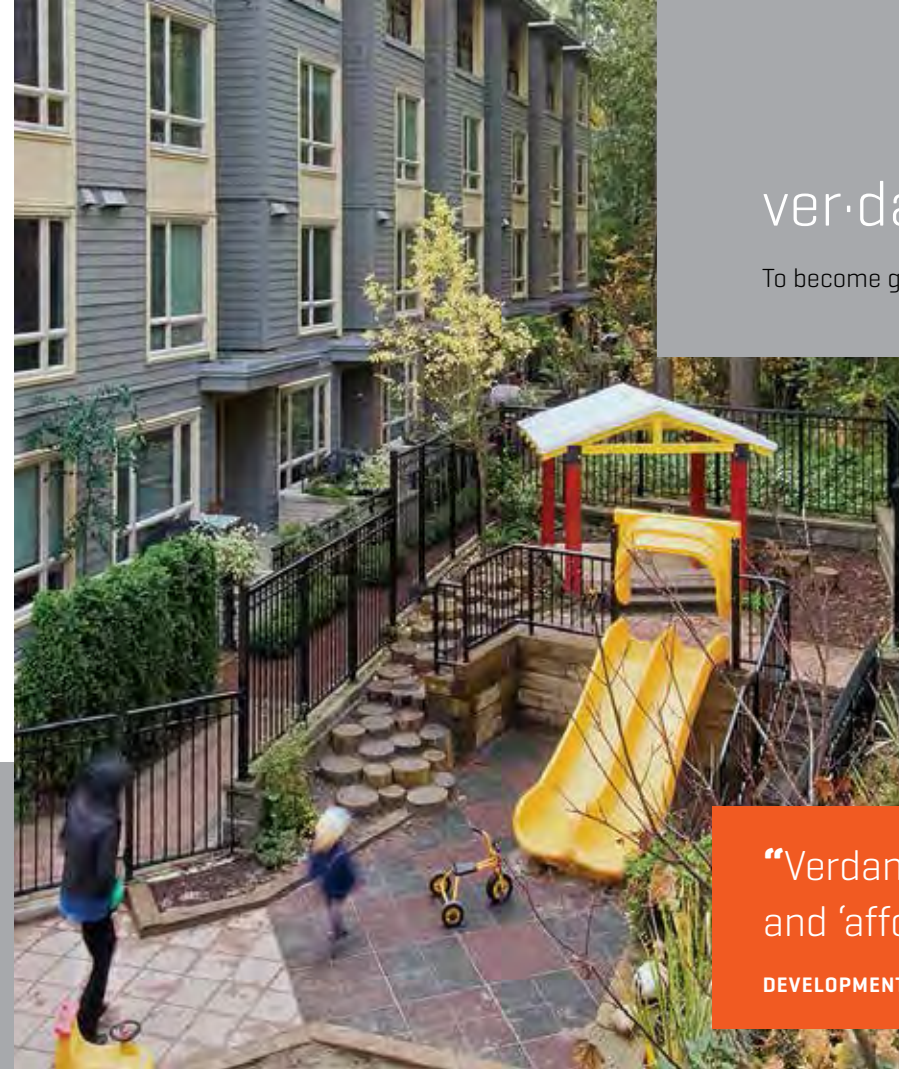
Given that the Trust is working to build a “model” community, it’s important to build a track record of success and to raise the capacity of development partners to improve their own performance. With that





in mind, the Trust is indebted to Karen Marler from Hughes Condon Marler Architects and to Ledcor Special Projects, who tackled a project that was risky and unfamiliar, partly because they considered it the right thing to do, and partly because they believe this is the way of the future. In addition to creating a beautiful, innovative and sustainable design, Marler worked tirelessly with Ledcor, with subcontractors and with regulators to help bring it all together. She says that this project will have a profound impact on how she approaches future designs, and that every subcontractor now has a new toolkit—and a new list of closer, cheaper, more responsible and environmentally conscious suppliers.

The Trust is equally grateful to our partners at the SFU Childcare Society. No matter the building, a childcare centre is only as good as its people and programming. The Society chose the Reggio Emilia approach—a preschool philosophy that emerged in the Reggio Emilia region of Italy after the Second World War. Responding to the war’s devastation, the parents crafted a method on the principles of respect, responsibility, and community, and a self-guided curriculum based on exploration and discovery in a supportive and enriching environment. In a complete and sustainable community, it’s a superlative fit. ■



ver·dant /'vɔrdnt/

To become green; lush

GREEN HOUSING DESIGNED FOR SFU FACULTY AND STAFF

“Verdant helped bust the myth that ‘green’ and ‘affordable’ are mutually exclusive.”

DEVELOPMENT MANAGER HEATHER TREMAIN

nur·ture /'nɜr chər/

The caring for and encouraging the growth of someone or something

ALL THE WORLD'S A CLASSROOM

The University Highlands Elementary School is both a LEED® Gold place to learn and a teacher in its own right. The building’s environmentally benign features are so transparent that students and teachers can’t help but notice the state of the world around them—and the influence they have by their own actions and decisions.

The school was always going to be a critical element in a complete community; it’s why the SFU Community Trust worked so hard, with the provincial government and with the Burnaby Board of Education, to bring the school online in 2010. With their

support—and with an out-of-use academic building that the Trust purchased from SFU—the Burnaby Board of Education’s Director of Facilities Russ Sales took up UniverCity’s sustainability challenge and ran with it.

LEED® Gold Success

The result was the first LEED® Gold school retrofit in B.C. history. Green features in the building include: a hybrid boiler, radiant heating, a hot-air recovery system, a reflective white roof, broken up by a rooftop garden and photovoltaic array, high-value insulation, low-e glass, no-wax floors; tap sensors and low-flow or low-flush water fixtures, and prismatic sensors that automatical-

ly adjust the lighting levels at all times of the day. And the meters for energy and water consumption are placed prominently, “so students can see the difference if they drop the temperature and put on a sweater,” Sales says.

There is also an outdoor classroom and a unique sustainability-focused curriculum that draws that natural world in and points the students out. “Our goal,” says Principal Lori Driussi, “is for all children and adults to be actively engaged in meaningful, relevant learning opportunities in a community of belonging that inspires an orientation to global citizenship.” ■

The best ideas often come in response to the most challenging problems—and one of the big problems facing the isolated Burnaby Mountain campus of Simon Fraser University at the turn of the last century was a complete lack of nearby affordable housing for faculty and staff.

The solution was Verdant, a 60-unit building that offered family-oriented housing priced at 20 percent below market rates. These units were not subsidized in any conventional way. Rather, the SFU Community Trust agreed to lease land to the developer, Vancity Enterprises, at 30 percent below market value in return for a guarantee that the development would be reserved for SFU employees—and that the 20 percent discount would be passed along whenever units were resold (this condition being attached by covenant to the title).

Vancity Capital Corporation also stepped up with a 25-year financing package that covered the up-front capital cost of installing a highly efficient geothermal and radiant heating system, which combined with double-glazed, thermally isolated windows to reduce energy consumption by 60 percent below conventionally designed condos. Strata owners will pay something closer to market rates for energy until the loan is paid back, at which point their costs will fall dramatically. In the meantime, everyone benefits from a 374-tonne annual reduction in greenhouse gas emissions, the equivalent of taking 72 cars off the road every year.

Other green features in the development include water efficient toilets, washing machines, faucets and showerheads; and non-toxic paints, adhesives and sealants, all of which combine to deliver a

set of high-quality, efficient and comfortable homes in a development that was recognized with the CMHC Best Practices in Affordable Housing Award on its completion in 2008 and has since been certified by the Canada Green Building Council as LEED® Gold.

“Verdant has been a model for other communities looking for market-based solutions to creating affordable housing,” says Heather Tremain, whose company, Resource Rethinking Building managed the development. Tremain said it is also gratifying to see how widely green building techniques are now in use. “At the time of completion, Verdant was probably the greenest market project in the region,” she says, adding that many of the features that were considered innovative then are typical today. ■



University Highlands Elementary School



UniverCity Childcare

COMING SOON

Altitude: 210-suite, two-tower apartment and townhome project on University Crescent—by Hungerford Properties.



Richard Bolton Park



Verdant Early Learning Centre

COMING SOON

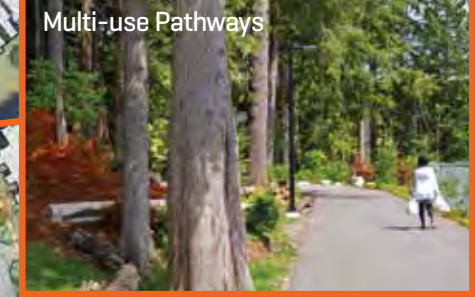
Centre Block: High Street mixed-use project with retail, services, and 60 apartments, a 17-storey, 98-suite residential tower at the corner of High Street and Tower Road, and 26 townhomes along Highland Court.



Cornerstone Merchants, Nesters Market



Town Square



Multi-use Pathways



Walking Trails

COMING SOON

Veritas: 158 suites in two four-storey buildings in the Slopes Neighbourhood, at the corner of Tower Road and University Crescent.

COMING SOON

The Slopes Neighbourhood (Phase 4)

Our next phase of development will be built on eight parcels and will include townhomes and family-oriented apartments. The Slopes will also include a neighbourhood park and walkways connecting to the High Street, the University Highlands Elementary School, and to 28 kilometres of trails in the Burnaby Mountain Conservation Area.

COMING SOON

Lift: 53-suite courtyard residential building at the corner of High Street and University Crescent by Porte Development.



Stormwater Management Ponds

Conservation Area
[forest surrounding community]

UniverCity FACTS

160 acres [65 hectares]

4,536 units

10,000 people

Average Gross Density:

62.5 people per acre

[154 people per hectare]

East Neighbourhood

- Gross Site Area: 65 acres (26.3 hectares)
- Net Site Area: 53.6 acres (21.7 hectares)
- Gross Density: 126 people per acre (312 people per hectare)
- Net Density: 152 people per acre (378 people per hectare)
- Max units: 3,735 (including High St. units)
- Estimated Population: 8,200 people
- 30 Development sites

Comparable Densities [Gross]

- Toronto's Yonge and Bloor: 54 people/acre (135 people/hectare)
- Vancouver's Yaletown: 76 people/acre (189 people/hectare)
- Vancouver's West End: 78 people/acre (195 people/hectare)
- Montreal's Plateau: 66 people/acre (165 people/hectare)

Housing

- Current Population: 3,500 people
- Developments Completed: 12
- Units Completed: 1,595
- Developments Under Construction: *Lift*—53 units; *Altitude*—210 units
- Developments in Permitting: *Veritas*—158 units; *Centre Block*—184 units

Housing Price Comparison

- UniverCity: \$450 per sq. ft.
- Metrotown: \$570 per sq. ft.
- UBC: \$900 per sq. ft.
- Brentwood: \$525 per sq. ft.
- North Vancouver: \$625 per sq. ft.
- Coquitlam: \$450 per sq. ft.
- Port Moody: \$450 per sq. ft.

Transportation

- 41% of residents commute to work by car —down from 60% in 2007
- 25% of residents commute to work by transit
- 27% of residents walk to work —up from 16% in 2007
- 30% of residents use transit once a week
- 20% of residents use transit a few times a month

Residents and Population

- 68% of households have two adults
- 22% of households contain single adults
- 41% of households have children —up from 20% in 2007
- 47% of households have some affiliation with SFU —up from 36% in 2007
- 24% are students, 19% are staff and 17% are faculty

Services and Amenities

- University Highlands Elementary School Current Enrolment: 195
- UniverCity Childcare Current Enrolment: 50 Students
- UniverCity Childcare Costs per month: Five Day—\$820, Three Day—\$540, Two Day—\$380
- Richard Bolton Park: children's play, basketball court and leisure
- Phase 4 Edible Park: children's play and community gardens
- Conservation Area: 320 hectares (790 acres) donated by Trust; 577 hectares (1,426 acres) in total

com·mu·ni·ty / kə'myoōnitē/

A social group of any size whose members reside in a specific locality, sharing government, services, and fellowship



Two of the most prestigious, sustainable, and community-building agencies in the world have teamed up with the SFU Community Trust to learn lessons from the UniverCity experience and to raise the sustainability standard yet further in the development's third and fourth phases.

Prince's Foundation for Building Community

From the UK, the Prince's Foundation for Building Community signed a Memorandum of Understanding with SFU in 2009 agreeing to work together to develop an international knowledge network that advances sustainable urban development. One of the first projects in that pursuit was a week-long workshop in 2011 using UniverCity as "a living laboratory for experimentation and discovery," and marshalled a blue-chip list of planners and sustainable community experts to use the Prince's Foundation's multi-disciplinary methodology to engage stakeholders, develop physical configurations, and assess a range of design requirements for UniverCity's future expansion.

International Living Future Institute

From the US, in 2012, the Oregon-based International Living Future Institute launched a Living Community Pilot, identifying UniverCity and two communities in the US as templates for the development of Living Communities, which the Institute defines as "socially just, culturally rich and ecologically restorative." The first part of this project included an intensive review and revision of UniverCity's next development phase.

Both of these relationships are ongoing, ensuring that UniverCity will continue to be at the global sustainability forefront—not just building buildings, but building community. Working with the Prince's Foundation and the International Living Future Institute also helps UniverCity achieve its mandate to be a "model sustainable community." The world will learn quickly of every success and the Foundation and the Institute will be eager to help others understand how to emulate UniverCity's best practices. ■



“High Street was a critical anchor for UniverCity and an essential connection to the university,” says SFU Community Trust President and CEO Gordon Harris. “We knew we had to build this as a foundational piece for our complete community. And we have been delighted by the commitment to our community shown by retail partners such as Nesters Community Markets. It’s all part of what makes UniverCity one of the most livable communities in the country.”



UniverCity AWARDS

UniverCity receives a great deal of attention for its innovative approach to sustainable community building, earning many awards and honours for SFU Community Trust and its development partners.

UniverCity's winning reputation attracts national and international media attention, including coverage by CTV, CBC, Global, BC Business Magazine, Granville Magazine, Vancouver Magazine, Shared Vision, New York Times, Maclean's, Grist, Dialogue, Business in Vancouver Green Edition, Toronto Star, Vancouver Province and Vancouver Sun. David Suzuki's television program 'The Nature of Things' highlighted UniverCity as a healthy, walkable community on 'The Weight of the World', as did Metro Vancouver on their program 'Our Livable Region'.

UniverCity is also often featured as a leader in sustainable development at workshops and conferences across Canada, the USA, the UK, and beyond.

- **2013 Quality Urban Energy Systems of Tomorrow** QUEST Community Energy Builder Award
- **2013 Canadian Society Landscape Architects Award** Award of Excellence: UniverCity Childcare Centre
- **2013 FortisBC Award for Excellence** Excellence in Energy Efficiency in New Construction: Origin
- **2013 Canada Green Building Council (CaGBC) National Leadership Awards** Green Building Champion Award: UniverCity Childcare Centre
- **2013 Greater Vancouver Home Builders' Association Ovation Award** Best Multi-Family Lowrise Development: Origin
- **2012 Vancouver Regional Construction Association Award of Excellence** Silver Award: UniverCity Childcare Centre
- **2012 City of Burnaby Environment Award** Planning and Development: UniverCity Childcare Centre
- **2012 Urban Development Institute Award of Excellence** Most Sustainable: UniverCity Childcare Centre
- **2012 Vancouver Regional Construction Association** Silver Award of Excellence, Sustainable Construction: UniverCity Childcare Centre
- **2012 City of Burnaby** Environment Award: Planning and Development for the UniverCity Childcare Centre
- **2012 Planning Institute of British Columbia** Award of Excellence: Planning Practice, City & Urban Areas
- **2011 Canadian Institute of Planners** Award for Planning Excellence: Neighbourhood Planning
- **2011 Federation of Canadian Municipalities** Sustainable Communities Award for Integrated Neighbourhood Development
- **2009 Urban Land Institute** Award for Excellence: The Americas for Best Practice in Design, Architecture and Development
- **2008 Canadian Mortgage and Housing Corporation** Best Practices in Affordable Housing Award for the Verdant @ UniverCity
- **2008 LivCom Awards** Gold Award and third place-ranking overall in the Sustainable Projects Category
- **2008 City of Burnaby** Environment Award for Planning and Development for the Verdant @ UniverCity
- **2008 American Planning Association** National Excellence Award for Innovation in Green Community Planning
- **2007 Urban Development Institute** Award for Innovations in Creating a More Livable & Sustainable Region
- **2007 Urban Development Institute** Award to the Verdant @ UniverCity for Innovations in Creating More Sustainable Development
- **2007 Urban Development Institute** Award to the Verdant @ UniverCity for Innovations in Creating More Affordable Housing
- **2007 City of Burnaby** Environment Award for Planning and Development
- **2006 Planning Institute of British Columbia** Award of Excellence for Site Planning and Design
- **2005 Canadian Home Builders' Association** SAM Award for Best Community Development in Canada
- **2005 Canadian Home Builders' Association** Georgie Award to The Cornerstone for Best Environmental Consideration and Energy Efficiency
- **2005 Association of University Real Estate Officials (AUREO)** Award of Excellence
- **2005 City of Burnaby** Environment Award for Planning and Development for The Cornerstone
- **2005 Urban Development Institute** Award for Excellence in Urban Development for The Cornerstone
- **2005 Burnaby Board of Trade** Newsmaker of the Year Award
- **2005 BC Hydro Power Smart Excellence Award** Residential Building Developer for The Cornerstone



u·til·i·ty /yoō'tilətē/

The state of being useful, profitable, or beneficial

DISTRICT ENERGY SYSTEM PROVIDES BEST CONNECTION

Things that work well—efficiently and inexpensively—have always been celebrated for their “utility.” And the word “utility” has also been pressed into service to refer to any of the big systems that provide the kind of service and value to customers who could not manage or afford to build the necessary network on their own. Those are usually “public utilities”—sewer, water and energy systems.

The SFU Community Trust has introduced one such utility into UniverCity, in the form of a District Energy System that will provide heat and hot water to hundreds of units in more than two dozen buildings from a single, highly efficient energy source. In the process, it will save a fortune in duplicated infrastructure. It will also reduce UniverCity's associated greenhouse gas emissions by 70 percent—11,000 tonnes a year.

Thanks to an additional B.C. government investment of \$4.7 million, the system will also serve SFU directly, replacing the aging gas boilers that currently heat the university's institutional buildings.

Investing in Infrastructure

The challenge in building this kind of system comes up front in the form of a large investment in the connecting infrastructure. In UniverCity, that will include 200 mm (8-inch) trunk lines and 60 mm (2-inch) pipes that will carry hot water from a central energy source to individual buildings and homes. This, again, would be impossible for individual home buyers and unwieldy for developers working on individual buildings. So SFU Community Trust partnered with the energy firm Corix Infrastructure which is building and will own and operate the system. Corix has calculated that it can run the system at a

profit, even while delivering an ongoing dividend to the SFU endowment—and keeping energy prices significantly below what homeowners would have paid with conventional baseboard heating and individual hot water heaters. But just to be on the safe side, the B.C. Utilities Commission has authority to regulate, to ensure fair pricing in perpetuity.

Ultimately, the District Energy System will be driven by a biomass boiler, fueled by construction wood waste that would otherwise wind up in a landfill site. For the time being, however, it is running on a small, high-efficiency natural gas boiler that is serving the new UniverCity Childcare Centre and three residential buildings, Porte Development's *Origin*, Mosaic Homes' *Nest*, and Liberty Homes' *Highland House*. ■

en·dow·ment / en'doumənt/

An income or form of property given or bequeathed to someone

INVESTING IN ACADEMIC EXCELLENCE

The underlying goal of UniverCity is and always has been to help make Simon Fraser University better.

That was the intent in 1964 when the B.C. government set aside lands for the new SFU campus on Burnaby Mountain: there was enough property on which to build Canada's best comprehensive university and an additional 385 hectares that could be developed to build an endowment that would support SFU teaching and research.

That was also the intent in 1995, when SFU announced that the university would develop that land into a model sustainable community. Thanks to that vision, and the quality of subsequent work, the SFU Community Trust has already contributed more than \$30 million. "We have converted an asset, land,

into an asset, cash," says Pat Hibbitts, SFU's Vice-President Finance and Administration and a member of the SFU Community Trust Board of Directors.

The Trust has also contributed \$15 million-plus in physical assets, everything from a new major water supply line to a town square—a community meeting place for students, faculty, staff, and residents.

The cash will go to work as an endowment, generating interest income for university use. VP Hibbitts explains that the SFU Board of Governors decided in 2005 that the first \$3 million per year of interest income would go to research. As the endowment gets larger (the Trust is aiming at an ultimate contribution between \$135 and \$150 million), the Governors will decide how to distribute the rest.

On that count, SFU President and Vice-Chancellor Andrew Petter says one thing is clear: "The endowment wealth will always go toward raising SFU's capacity for excellence."

"As a public institution that operates on a mix of taxpayer support and student tuition, SFU takes seriously the responsibility to provide the high-quality basic infrastructure that is necessary to give every student access to a world class education," President Petter says. "But the endowment gives us an opportunity to reach even higher, to continue to distinguish SFU as the leading engaged university, defined by its dynamic integration of innovative education, cutting-edge research and far-reaching community engagement. That will always be the goal for any endowment spending: excellence." ■

AT A GLANCE:

ADVANCING KNOWLEDGE; BUILDING A BETTER FUTURE

To date, through the development of UniverCity, SFU Community Trust has contributed:

- More than **\$30 million** to the SFU's Community Trust Endowment Fund, including:
 - Over **\$6 million** in funding to high-quality, interdisciplinary research projects.
 - Another **\$93,750** in funding for graduate fellowships to support 15 doctoral students in a range of areas, including linguistics, sociology, political science, English, and other disciplines within Humanities.
- Approximately **\$15 million** worth of important infrastructure for SFU, including the Town Square enjoyed by students and utilized for community events.
- **\$30,000** toward SFU Urban Studies Program's Initiative in Urban Sustainability and Development Fund.
- **\$5,000** to the Dr. Warren Gill Memorial Endowment Fund, awarded annually to a third year undergraduate student majoring in Human Geography for leadership and/or service within the university community or in representing SFU to the community at large.
- **\$5,000** to the Dr. Warren Gill Memorial Lecture, presented by SFU's City Program. Each year a guest lecturer presents new, innovative, thought-provoking ideas about life in urban communities.
- **\$3,000** to the UniverCity Annual Bursary in Community Planning. A **\$750** bursary awarded annually to an upper level Geography student.

RESEARCH

The Community Trust Endowment Fund (CTEF)

provides up to five years of research funding, to a maximum of \$500,000 per year for approved projects, of which there are currently seven:

Human Evolutionary Studies: Interdisciplinary research into how evolution has affected everything from perception, thought and culture to prejudice, interpersonal violence and schizophrenia.

Using a System Analytic Approach to Living with Chronic Diseases: Identifying individual and systemic solutions demonstrated by people with chronic diseases who are 'living well' in society.

Secondary Effects of Climate Change on Human and Ecosystem Health: Researchers and experts in climate, water, air quality, disease, ecology, human health, risk analysis, emergency preparedness, and visualization focus on secondary climate-change effects such as the spread of infectious diseases, water availability, water quality, loss of biodiversity and social migration.

Modelling of Complex Social Systems:

Academics, practitioners, and service providers will use mathematical and computational modeling to understand the dynamics that drive the incidence, distribution and control of crime, disease, homelessness and other social ills.

Bioinformatics for Combating Infectious

Diseases: An interdisciplinary team will use more-accurate and faster bioinformatics algorithms and tools to identify drugs and vaccines to counter infectious diseases.

Education Systems and Outcomes in Diverse

Communities: An interdisciplinary network will focus on education-related issues, especially as they apply to public policy, economic organization, aboriginal learning, immigration, urban studies, and population health.

Advanced Materials and Nanotechnology

for Medical Application: A team of chemists, biologists, kinesiologists and computer scientists will take novel molecules and nanomaterials from the lab into the clinical setting to develop new strategies for medical imaging, diagnostics, surgery and drug delivery.

ec·o·nom·ic / ,ekə'nämik/

Of, or relating to, economics or the economy; justified in terms of profitability

SETTING THE STAGE FOR A STUNNING SECOND ACT

GORDON HARRIS, PRESIDENT AND CEO



“We have achieved these goals by honouring two principles: one, if it isn’t economic, it isn’t sustainable; two, we’re proud, but not yet satisfied.” GORDON HARRIS, PRESIDENT AND CEO

Anyone who has ever watched the construction of a large building will have an idea of how long it takes to get “out of the ground.” The fencing goes up, the diggers move in and the excavation begins, a parade of dump trucks carrying away earth and a longer parade of cement trucks arriving to contribute to the below-ground storeys of parking lots and equipment rooms. When construction finally peaks above the sidewalk, there is an explosion of progress, with the building seeming to add new floors by the day.

That, figuratively, is where UniverCity is today. Proudly, we have built our foundation. Really, we have been “out of the ground” for some years—though we have actively avoided change that might seem explosive, preferring measured and careful preparation and execution.

We began with a great plan, guided by an extensive community consultation and crafted by Hotson Bakker Architects (now DIALOG). Then we invested, early and adequately, in critical infrastructure. We took care of the roads; and took greater care of what was between them, ensuring a stormwater management system that would, if anything, improve the amount, quality and consistency of fresh water flowing down the mountain. We built a High Street with a selection of cafes, restaurants and services—for new residents and for the SFU students, staff, and faculty who had, for so long, been isolated on Burnaby Mountain.

We worked with the province and the Burnaby Board of Education to develop an elementary school, and with the SFU Childcare Society to establish a childcare centre, to make this a convenient community for young families—a complete community. And most recently, we have worked with Corix Utilities to lay the foundation of a District Energy System. From now on, every new building in UniverCity will have access to an energy-efficient and low-emission source of heat and hot water—helping developers reach the UniverCity green zoning standard, which requires that every building exceed Model National Energy Code energy efficiency standards by at least 30 percent. Every home will also feature the luxurious comfort of radiant hot-water heating.

All the while, we have been working with some of the most creative and dedicated developers in Metro Vancouver, encouraging them at every turn to achieve a standard of quality, value and environmental efficiency that is unparalleled.

Now, we have 3,500 residents in a highly functional and—by global standards—admirably sustainable community. We are not quite half way to our target population of between 8,500 and 10,000, but we’ve certainly burst above the hoarding. We have distributed the first \$30 million of an anticipated \$135 million to \$150 million to Simon Fraser University as an endowment for teaching and research. And, as evidenced by the awards listed on

page 18, we have earned UniverCity wide recognition for its sustainable practice.

We have achieved these goals by honouring two principles: one, if it isn’t economic, it isn’t sustainable; two, we’re proud, but not yet satisfied.

On the first point, the SFU Community Trust mandate to build a “model sustainable community” makes it clear that this was never intended to be an expensive, unrepeatable experiment. Rather, we were to demonstrate how everyone could achieve a higher environmental and social standard of community building. That’s why, in particular, we are so proud to have developed the UniverCity Childcare Centre for almost 20 percent less than conventional centres being built in this region at the same time.

The imperative to remain economically sustainable—which is to say, to work within a responsible and conservative budget—has also guided the pace of development. While building a complete and coherent local community, we are sensitive to our place in the Metro Vancouver region; developers working at UniverCity are competing for buyers from around the region, so we have worked to stay in step with the larger market, careful not to do too much, too soon.

The second principle is basically a statement of our determination to continue to raise the bar. While we

have set a high standard for green building performance, so far, only the Childcare Centre achieves the Living Building target of being truly environmentally neutral, which is why we are gratified that the International Living Future Institute (ILFI) has committed to helping us scale up our successes—from the level of specific buildings and services to encompass the entire community. We are currently reviewing plans for remaining undeveloped lands within the community, looking for the best way to ensure the most functional and convenient access between new residential developments and the High Street, school, Childcare Centre and other community amenities.

Setting the Stage

On the transportation front, we remain optimistic about the prospect of a transit gondola connecting UniverCity to the Millennium line SkyTrain. Business-case studies have shown that a gondola will deliver excellent value, reducing greenhouse gas emissions, improving service frequency and reliability and freeing up dozens of diesel buses for use in other parts of the region.

The goal remains to deliver a livable, viable and sustainable community—one that complements SFU operations even as it contributes economically to the university’s teaching and research mission. Having set the stage, we are determined to ensure that UniverCity’s second act will be even better than the first. ■

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