

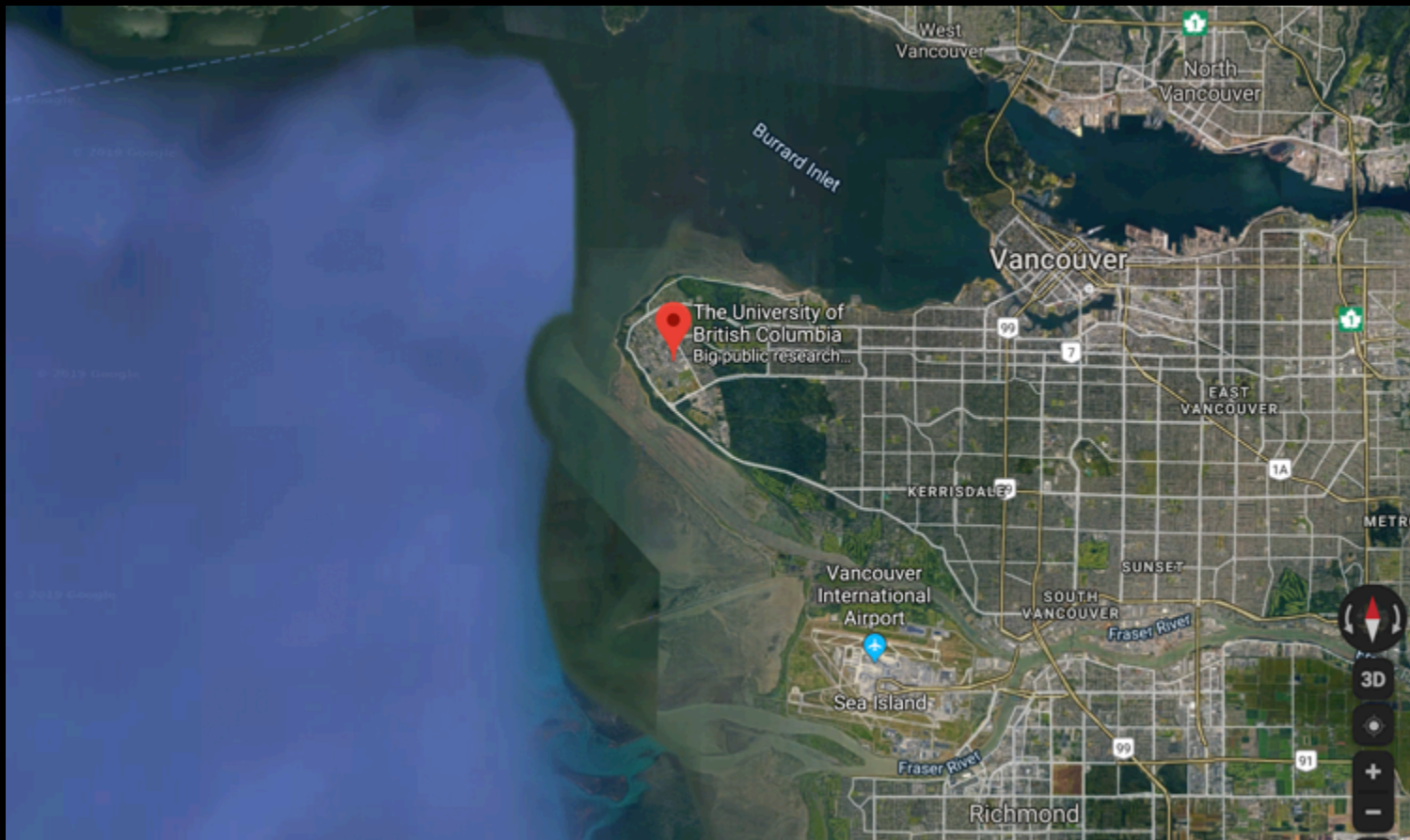
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Sustainable Heritage Case Study
Class Presentation
Nov.14, 2019

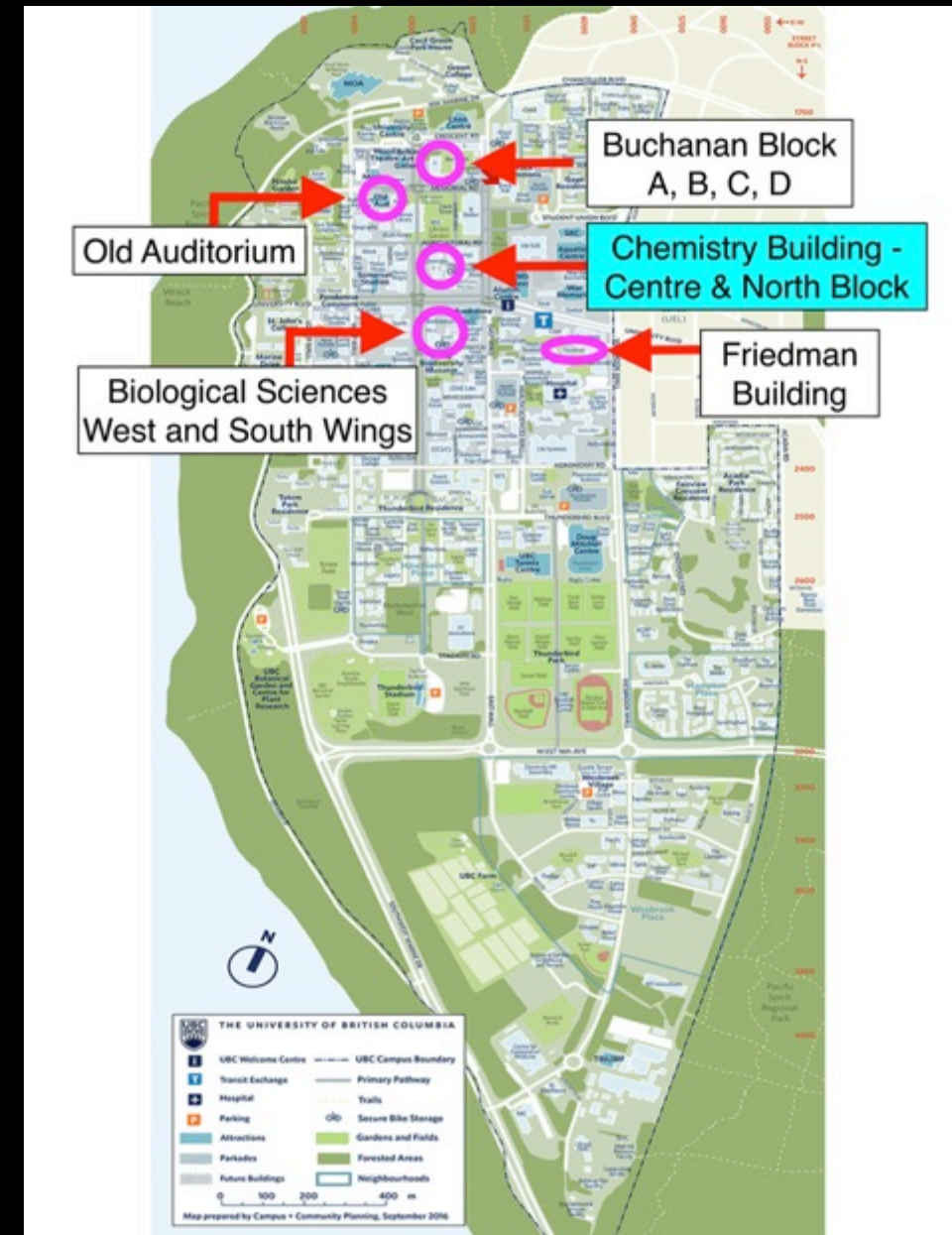
Renewing UBC's Campus

UBC Renew – Renewal of University
of British Columbia's Chemistry
Building Centre Block through
retrofits for energy efficiency

Maps



UBC campus in context within Vancouver, BC. Google Maps 2019



UBC campus map with UBC Renew projects

Description

UBC Renew

- 2003 partnership between *UBC* and *BC Government*
- \$320 million in deferred maintenance
- 10 buildings targeted for program
- Building renewal– HVAC, seismic, electrical upgrades, etc
- Save money - no more than 67% of costs compared to new construction
- LEED Silver or better

Chemistry Building Centre Block

- Part of original three Point Grey Campus buildings
- Collegiate Gothic style
- Renewal provided large open labs, seismic upgrades and energy savings
- Distinct architectural features preserved

UBC Chemistry Centre Block



Heritage Vancouver Society. 2010. UBC Entrance, Vancouver, BC

Before & After



Heritage Vancouver Society. 2010. UBC Class - before, Vancouver, BC.

Heritage Vancouver Society. 2010. UBC Class - after, Vancouver, BC.

Heritage Vancouver Society. 2008. UBC hall - after, Vancouver, BC.

Stakeholders

Consultants - Owners/Users - Organizations

- Provincial Government of British Columbia
- UBC Infrastructure Development
- University of British Columbia: Owner
- UBC community: Users
- Henriquez Partners Architects: Architect
- Stantec Consulting Ltd.: LEED consultant, Mechanical and Energy Engineering
- RADA: Electrical
- Loh CY & Associates: Structural
- Phillips Farvaag Smallenberg: Landscape architecture
- Ledcor Special Projects: General contractor
- KD Engineering Co.: Commissioning agent
- UBC Project Services: Project manager

Timeline

- 1860 – Point Grey established by British government as Colonial Admiralty reserve
- 1865 – 21 year timber lease on Point Grey
- 1908 – Provincial legislature passes new *University Act* to establish UBC
- 1910 – Point Grey selected as site for UBC campus
- 1914 – Point Grey campus construction begins. Halted due to World War 1
- 1922 – “Build the University” campaign by students
- 1925 – Point Grey Campus opens. Science (now Chemistry) Building construction complete
- 1997 – UBC becomes the 1st university to adopt a sustainable development policy
- 2003 – UBC Renew program began
- 2008 – Chemistry Centre Block UBC Renew project completed

“Build the University” Campaign



UBC Historical Photograph Collection. 1922. Chemistry building "sit in" as part of Great Trek , Vancouver, BC

Cultural Heritage

- No official heritage designation
- Part of original Point Grey Campus
- Prominent building within UBC Campus
- Renewal vs demolishing
- Architectural features preserved
 - Grey B.C. granite exterior
 - Leaded glass windows
 - Oak paneled doors
 - Granite tiles

Sustainability



4.A



11.4

- **Environmental:**
 - **Waste reduction:** 60% of interior retained, 80% materials recycled or refurbished
 - **Energy savings** (by 21%): high efficiency lighting and pumps, heat recovery, low-flow fixtures
 - **LEED Silver** certification
 - **Location** within densely populated campus – walkability & bike-ability, public transit
- **Social:**
 - **Increased accessibility** measures in older construction
 - **Upgraded indoor environment quality:** operable windows, more natural light, open spaces, low VOC materials
 - Creates spaces that are more conducive for learning
- **Cultural:**
 - Connection to original Point Grey campus through preserving heritage building
- **Economic:**
 - **Cost effective** compared to building new
 - **Reduced deferred maintenance**

Lessons

- Economics of heritage: when to renew vs re-build
- Combination of planning, safety and heritage preservation
- Challenge to retain as much of building fabric/ preserve architectural features while being able to create open spaces and achieve sustainability goals

References

Websites/ Journals/ Articles

A Brief History of UBC. (n.d.). Retrieved November 13, 2019, from <https://archives.library.ubc.ca/general-history/a-brief-history-of-ubc/>.

Chemistry Building. (n.d.). Retrieved from <http://www.library.ubc.ca/archives/bldgs/chem.html>.

KD Engineering. (n.d.) UBC Chemistry Centre. Retrieved from <https://kdengineering.ca/services/projects/>

Lancaster, C. (2018). *Campus Energy Infrastructure Study*. University of British Columbia

The University of British Columbia. (n.d.) UBC Recognized by Heritage Vancouver for building revival program. Retrieved from <https://planning.ubc.ca/news-events/newsletter/2013-07-30/ubc-recognized-heritage-vancouver-building-revival-program>

The University of British Columbia. (n.d.) History. Retrieved from <https://www.chem.ubc.ca/history>

The University of British Columbia. (n.d.) Chemistry Building Centre Block UBC Renew. Retrieved from <http://infrastructuredevelopment.ubc.ca/projects/chemistry-building-centre-block-ubc-renew/>

Images

Google Maps. 2019. UBC context within Vancouver.

<https://www.google.com/maps/place/The+University+of+British+Columbia/@49.2499845,-123.2682672,22993m/data=!3m1!1e3!4m5!3m4!1s0x548672cc2fd41e03:0xc79dd4e7732aa2f3!8m2!3d49.2606052!4d-123.2459938>

MSA UBC. (n.d.). UBC Campus Map. <https://msaubc.org/campus-map/>

Heritage Vancouver Society. 2010. UBC Entrance, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933109143/in/photostream/>

Heritage Vancouver Society. 2010. UBC lab - before, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933109657/in/photostream/>

Heritage Vancouver Society. 2008. UBC lab - after, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933109531/in/photostream/>

Heritage Vancouver Society. 2010. UBC hall- before, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933702936/in/photostream/>

Heritage Vancouver Society. 2008. UBC hall - after, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933109235/in/photostream/>

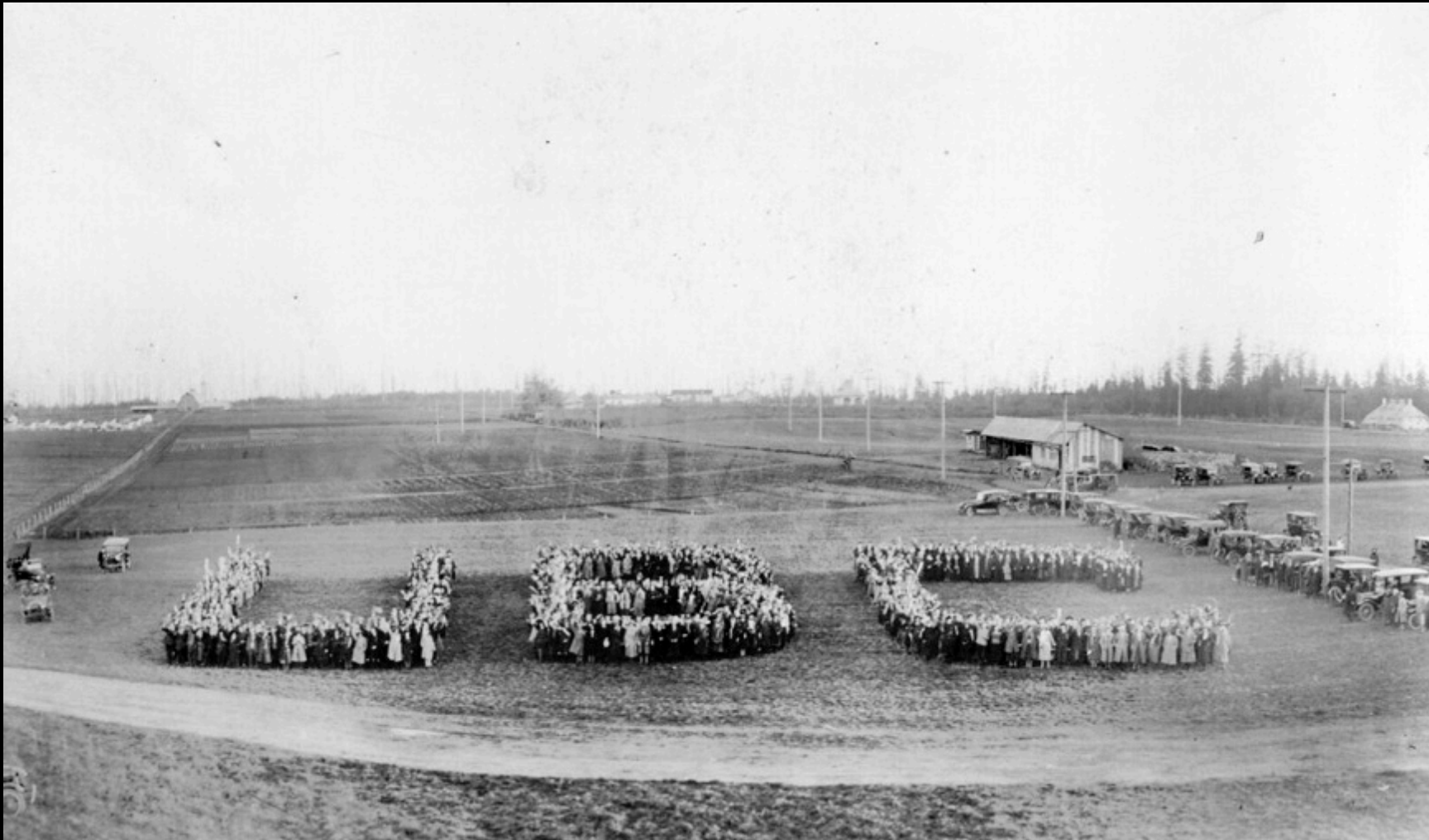
Heritage Vancouver Society. 2010. UBC Class - before, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933108955/in/photostream/>

Heritage Vancouver Society. 2010. UBC Class - after, Vancouver, BC. <https://www.flickr.com/photos/heritagevancouver/4933108807/in/photostream/>

UBC Historical Photograph Collection. 1922. Chemistry building "sit in" as part of Great Trek , Vancouver, BC. <https://www.flickr.com/photos/ubcarchives/16336140217/in/photostream/>

UBC Historical Photograph Collection. 1922. Chemistry building "sit in" as part of Great Trek , Vancouver, BC. <https://www.flickr.com/photos/ubcarchives/16514339255>

Thank-You



UBC Historical Photograph Collection. 1922. Chemistry building "sit in" as part of Great Trek , Vancouver, BC