

UBC Social Ecological Economic Development Studies (SEEDS) Student Report

UBC Health Sciences Precinct Smoke-free Zone Planning Strategy: A Case Study

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Executive Summary

This report provides an overview and a critical evaluation of the current and prospective smoking policy in UBC. The specific spatial scope is set at the Health Sciences Precinct, while the findings provide general guidelines to university smoking regulations and can inform future decision-making.

The first half of the report centers on cases studies. Smoking policy of representative parallel institutions are reviewed and analyzed to identify best practices. This report then critically evaluates the transferability of other institution's policy and infrastructure. It also reviews the merits and disadvantages of various policies and outline recommendable practices.

The second half of the report seeks to establish the issue around a local context. UBC's current policy on smoking is reviewed to outline the responsible parties and policy environment. Specific local policies around the hospital region are discussed in detail to reveal the current conflicts and ambiguities associated with smoking regulation. This part of the report gives an idea of the capacity for local smoking policy advancement. It reviews opportunities and challenges to a large-scale smoke-ban, and present alternative solutions and other areas of focus.

There are a few key findings relate specifically to the Health Sciences Precinct (HSP):

- 1) There are multiple policies that are currently effective in the region. Conflicts of the policies can be found and a lack of stakeholder coordination is observed. It's recommended that a uniform policy to be adopted in the region to avoid confusion and to ensure better compliance.
- 2) Policy coordination with VCH representative, UBC's building operation, Faculty of Medicine and other local health committees in the precinct is crucial for large-scale policy advancement. Responsible parties should be clarified, procedures of policy-making should be established along with campus planning, and capacity for infrastructure upgrading should be established in order for a more feasible policy proposal to be developed. Moreover, example of purposeful smoke-ban has also been found for UBC Botanical Garden, and a few unintentional cases of smoking kiosks have been noted by building operation. The effectiveness and usefulness of these initiatives can be referenced upon making new policy.

- 3) HSP does not hold administrative power to the land and can also act as policy leaders to initiate wider discussion on the potential advancement of smoking policy. Consent and agreement from multiple parties should be gained before proposing a large-scale smoke ban to UBC VP finance.
- 4) Alternatives to a “precinct-wide” smoke ban include establishing designated smoking zones along with designated smoke-free zones. “Low impact” zones with low foot traffic and low visibility in the precinct can be identified as potential designated smoking sites. The establishment of designated smoking zones as an inclusive measure may allow a larger scale smoke ban to be put in place.
- 5) VCH’s policy is more stringent than UBC’s general policy, and calls for a smoke-ban near hospital facilities. But since the policy is technically not applicable on UBC’s land, sandwich board signage by VCH should either be taken away, or to be replaced with “reminder” style messages that call for a smoke-free environment around the hospital. Experience on policy implementation, cessation programs, and infrastructures can be borrowed from VCH to aid local practices.
- 6) Outdated ashtrays in Patient Park should be upgraded to more effective models that have been seen around campus. More smokers’ poles can be added to hotspot to collect cigarette wastes, and to direct smoking away from building entrances and high impact zones.
- 7) Smoke-free practices in a university setting usually start around medical facilities and hospitals. Example can be found for University of Cincinnati (where the new president of UBC used to be) where hospital surrounding areas are declared as smoke-free zone before a campus-wide smoke ban is initiated. This supports the call for a stricter policy around health-centered areas. Further consideration can be built on inclusion measures and stakeholder engagement etc.

A few findings applicable for university-wide smoking policy making can be outlined as follow:

- 1) There are three primary reasons to establish or advance a smoking regulation.
 - a. To avoid harmful second-hand smoke and to minimize adverse health impacts of smoking
 - b. To reduce cigarette waste and to protect vulnerable ecological areas
 - c. To advance sustainability standards and practices

Policy advancement that builds firmly on the first reason can be expected to be the most effective. Small scale policy initiatives that build on the second reason have also been found successful (such as the botanical garden). It's recommended that policy initiatives to be built on the first two values and such rationale to be conveyed to the public through signage and outreach programs to achieve high rate of compliance.

- 2) UBC campus has a considerable size and a highly diverse land use with various population groups. A large scale smoke ban, while working reasonable well for some other institutions, can be hard to implement or monitor at UBC. Potential human right issues, addiction populations, and inclusion issues can also be involved with such decision. The decision may also be hard to justify since there are available “perimeters” in UBC where smoking does not pose threats to other’s health or the environment. Therefore, small-scale regulations that either reinforce the “meters rule” or tackle smoking hotspots can be preferred solutions.
- 3) No smoking “meter rule” and designated smoke-free / smoking areas are the two popular measures to regulate smoking. Neighbourhood universities that adopt the designated smoking area policy sometime face challenges such as poor compliance, outdated infrastructure and lack of weather consideration. Cases where high rates of compliance are noted occur only after a long policy implementation period – when the visual identity of infrastructure has been established and the policy has become a part of the culture.
- 4) Establishing small scale smoke-free zone requires signage that communicates the policy as well as the rationale behind such policy. Good landscape maintenance that minimizes the “broken window” effect communicates environmental messages that support the policy. Identification of areas that allow smoking in the vicinity of the designated smoke-free zone can also increase compliance and understanding.

- 5) Inconsistent signage that denote different “meter rule” from the official policy can be found across campus. Policy conflicts are particularly noticeable in the HSP. Efforts can be made to straighten out the inconsistency and promote coordination of various stakeholders on the issue of smoking.
- 6) Areas that are “perimeters” or low-impact zones can be identified. Infrastructure and signage can be used to direct smoking activity to these areas to minimize harms and to effectively collect cigarette wastes. (e.g. Marine Drive Residence, botanical garden, UBC NEST etc.)
- 7) To better manage the issue of smoking, more data can be collected on current hotspots of smoking and the effectiveness of various infrastructures, outreach programs and campaigns. The issue of smoking management can also be brought on the agenda of Local Health Committees across campus. Surveys can be deployed to gather public opinions on the issue.

*The Color Coding in This Report

Due to the lengthiness of this report, some most relevant discussions and analysis are highlighted using distinguishing background colors to aid the reading process. The background colors also denote how these discussions are relevant to advancing smoking policy or establishing Smoke-free zone in UBC.

Color-coding legends:

Social - Content that works more in favour of the motion

Ecological - Content that present challenges and concerns

Economic - content that is key to moving forward with policy planning

Development - content that indicates a certain degree of uncertainties

Link to the presentation which synthesizes information in the report:

https://docs.google.com/presentation/d/1bhV_ad87FOrMnZwBOucE9Ndb0v2HS3Y8tuwvCFGNSPw/edit?usp=sharing

I. Project Background & Introduction

UBC Faculty of Medicine initiated the investigation to look at whether the Health Sciences Precinct can be designated as a smoke-free zone on campus. While UBC has an existing “8-meters rule” that governs smoking activities, rooms for improvement have been noted by Faculty of medicine and Building Operation. Student researchers were entrusted to work with SEEDS, facility planning unit, building operation unit and the public; to examine the necessity, feasibility, and future strategy to designate a large-scale smoke-free zone on campus. This project assesses smoke-free policies implemented by analogous universities to see whether UBC needs to push for a stricter policy. This report also deals with UBC Health Sciences Precinct and UBC current policies specifically as a case study to present the complexity of the issue in a local context. I hope to reflect on the opportunities and potentials of the policy proposal, as well as the challenges and concerns that revolve around it. Several alternative solutions and management priorities are presented throughout the report.

The broader background of the issue is the government-level smoking policies that influence policy strictness in UBC. Under BC Tobacco Control Act, smoking has been banned in all enclosed buildings and workplaces; and a 3 meter radius from any openings of buildings is generally prescribed as smoke-free (Province of British Columbia). City of Vancouver has supported the Act by adopting the indoor ban and extending the outdoor restriction to 6 meter (Health Bylaw, City of Vancouver). UBC, as an unit of independent governance, has been committed to both provincial and municipal standards, and has established elaborate smoking policies that either measure up or exceed the standards as early as 1991 (UBC Board of Governors, 2007). As recent amendments of governmental policies push for tighter control of outdoor smoking (e.g. smoke ban in public spaces), UBC has since revised its policies to the “8-meter smoke-free areas” to keep up with the stricter stance. Yet neither smoke-free zones nor designated smoking zones have been officially established on campus as of 2016. As the notion of exploring such possibility came forward, it is critical to research and understand the diverse ways the issue has been approached. Clarification on current policy environments is needed to recognize both rooms for development, and potential limiting factors. With such overarching

goal, this project attempts to critically construct the policy design, decision-making process and planning guidelines in dealing with smoke-free zone designation in UBC.

The report opens with a brief discussion on the harms of smoking and the main issues to tackle with smoking behaviour regulations. Then the report discusses the policy implemented by several analogous institutions to establish the common policy standard of other schools; examine the transferability of the policies, and summarize lessons from their experiences. The following section introduces the nature of the “Health Sciences Precinct” as a multi-land use area inside UBC. It then provides a briefings of local field study results to better understand the current issues of smoking and the status of policy compliance in the area. Subsequently, existing policy environment and decision-making stakeholders are introduced to clarify policy planning process and implementation. The report then brings together voices and discussions from various campus groups, as well as the result from a complementary survey to address the public opinions around the issue. Lastly, based on the information collected and establishment of understandings, this study reflects on the implications of these various aspects.

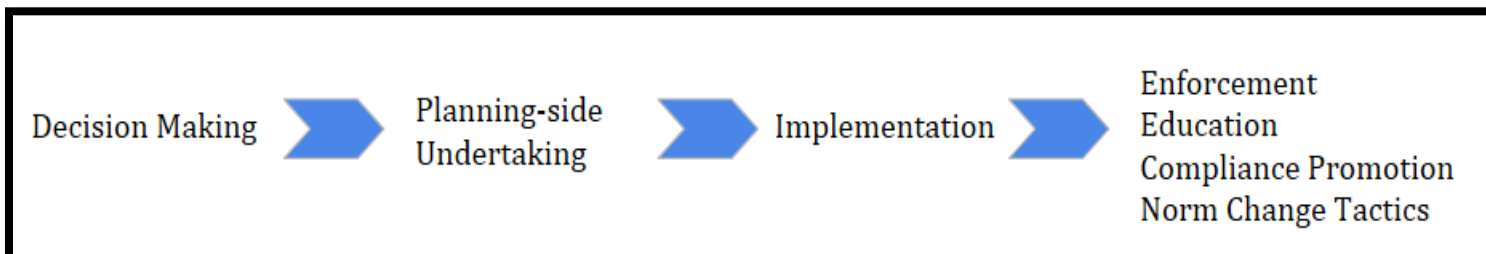
The report arrives at several general suggestions with regard to the broad issue of smoking:

- 1) Smoking regulation is an issue of complexity in a large campus setting. When making large scale restrictions, accommodation of groups of special needs and certain degree of flexibility should be incorporated in order for the policy to be inclusive, as well as to avoid potential human right issues, and to generate better compliance. The social sustainability dimension should be taken into consideration for a sensible policy design.
- 2) Certain “low-impact zones” that wouldn’t be affected much by smoking activities should be defined to better understand the location that can designated as smoking zone. This provides opportunity to accommodate smoking when designating a larger smoke-free environment.
- 3) The main issue to tackle, and the main goal to achieve by establishing a more stringent policy should be properly defined before making policy decisions. The goals would align more with public interest if they concerns with health implications - that they are minimizing the negative impact of second-hand smoke. The policy would also gain more traction if it’s “problem-solving” based,

for example protecting vulnerable population or vegetation from the side effects of smoking.

II. Methodology

As of the overall research framework, the project was intended as a socio-psychological study that focuses on norm change tactics and smoking behaviour interventions in order to promote compliance to a future smoke ban. As the project commenced and more knowledge of local smoking policies are obtained, it has become evident that for a top-down policy initiative that's dealing with a sensitive and complex topic such as smoking, behaviour intervention tactics and programs may not be the priority of the issue at hand - as good compliance can not be achieved if existing policies are not well-clarified, planning is not well-adjusted to local context, and intended strategies are not feasible to implement from a planning perspective. That is, for policies that are not rigorously monitored or formally enforced, the success it relies more on a sensible planning to provide guidance to long-term policy acceptance and compliance, rather than periodical behaviour interventions.



Discerning smoking issue and regulations over a temporal and spatial variation of scope, and then nailing it down to a local context can be deemed as a more effective research framework to enrich understanding, and bring immediate impact to the implementation stage. Comparatively, enforcement and promotion tactics are complementary and serve in the final stage to promote the right policy. Effective tactics can also be referenced to or learnt from other institutions more directly. Therefore, as a geography student, it came to my realization that a geographical lens which closely examines people's interaction with space, land use patterns,

spatial scopes and planning policies may have a better applicability to the case. That is, being able to understand questions such as:

“Can a best practice be put together and copied into action?”;

“What might be the complications?”

“How are we doing with existing policies?”

“where exactly is Health Science Precinct and who is residing in it?”

can be more instrumental in developing a sensible and feasible smoking policy strategy.



As a result, the focus of this study was adjusted from looking at the enforcement stage back to planning and decision making in order to clarify the scope and steer the implementation and long-term norm change process in the right direction.

Additionally, part of this project originally involves reviewing relevant academic literatures to identify best-practices in designating smoke-free zone, and to evaluate the effectiveness of progressive smoking policies. Upon conducting the research, it's been discovered that literatures which deal with smoking in institutional contexts, in outdoor spaces, and at a local scale have been incredibly rare. While

- most journal articles or research reports mainly focused on legislation & government level policy formation on smoking issue

- literatures that evaluate the effectiveness of local tobacco control policies largely focus on indoor and workplace no-smoking policies
- studies and surveys conducted in hospitals and medical institutions have been uniformly regard only with indoor smoke-bans
- studies about full smoke-ban in education facilities are dealing with issues in schools (primary and secondary)
- studies in institutional contexts have been largely based on opinion pool and public perception surveys in America
- very few literatures evaluate the design and suitability of various infrastructures
- very few literatures incorporate evaluation of effectiveness / pitfalls/development of regional / local policies

Due to the overall shortage and limitations of literature review, looking directly at representative institutions' experience was deemed as a more constructive approach amongst the project team. Case studies can directly introduce policy options; and may exhibit less of a gap between conceptual researches vs. actual planning practices. From a geographical perspective, case studies can support decision making if it is established that other universities tend to have stricter policies than UBC. Reflection on case studies can points to the key issue of scoping: in addition to best-practice investigation, policies and infrastructures should be tied to specific local context.

A selected number of institutions were selected as case study subjects according to the following considerations:

- A. Universities in BC with context-specific smoking regulations (UBCO, UVIC, SFU)
- B. Other Analogous Institutions with noticeable cases in Canada (UOttawa, McMaster, Dalhousie University)
- C. Institutions where the new UBC president (Santa Ono) and Dean of Medicine used to be (University of Cincinnati, Imperial College of London, National University of Singapore) & mention of UVIC Australia

For each institution, smoking policy and infrastructure was reviewed and representatives from a selection of the nearby Universities were contacted to learn more about the background of their policies, associated programs, ongoing issues and developments. University smoking

policies were summarized through reviewing university's official policy documents and departmental postings. Practices and insights were collected by informal interviews of institutional representatives through email. Similar measures were taken to understand local (UBC and Health Sciences Precinct) policies; informal interviews were conducted with planners and representatives affiliated with UBC or VCH.

To further understand UBC and Health Sciences Precinct's existing smoking policies, the effectiveness of policies, status of the issue of smoking and local land uses, field studies were conducted. The field study mainly includes a "butt count" campaign that look into smoking "hotspots" and areas of policy violation. It aims to provide information on current policy effectiveness and hints to small-scale alternative solutions. A public opinion survey was designed by Marcus Zhang and I to gather public opinions on the motion. Brief discussions and critical reflections on the survey can be find in this report section.

III. Harms of Smoking and Three Main Issues to Tackle

The harms of smoking need to be established to answer the questions of "why does smoking activities need to be regulated and what do we try to achieve with smoking regulations?".

Nowadays, the adverse effects of smoking have been generally well-established and widely-broadcasted. The most fundamental harm of smoking is that it poses significant risks on human health, and increases the chance of developing heart diseases, lung cancers, and respiratory diseases among others (CDC, 2015). Smoking diminishes smoker's overall health condition, and can be a direct cause of premature death (CDC, 2015). Smoking has been listed as the number one preventable cause of death in Canada, and is estimated to cause close to 3000 death each year in BC (VCH, 2014). The most controversial aspect of smoking behaviours with regard to *public health* (as opposed to personal health) is second hand smoke which is also carcinogen, and contains hundreds of toxic chemicals that threaten people's health upon inhaled (Fraser Hospital, 2014). Second hand smoke is smoke exhaled by the person smoking (also known as "mainstream" smoke), and is also smoke from burning tobacco products ("side stream smoke) with the latter likely more harmful of the two (Foster & Keller, 2008). Unwilling

exposures to second-hand smoke by non-smokers, and *by smokers* are therefore a highly objectionable imposition due to the health risks and associated nuisances.

The littering of cigarette waste is the second focal point of debate as cigarette butts are often regarded as one of the most littered object in the world. As a habitual practice, cigarette butts are often simply flicked aside or casually discarded around the spot of smoking. As a result, it's estimated that they comprise around 25–50 percent of all collected litter items from roads and streets (Healton, C. G et al., 2011). Cigarette filters (the main body of butts) are made from cellulose acetate - a type of plastic. Thus contrary to popular beliefs; cigarette litters are not biodegradable. According to various sources, depend on the condition of surrounding area, it may takes from 1.5 up to 10 years for the filters to decompose. During the time, cigarette butts can be sources of toxic leaches upon contacts with water; can cause a sense of blight and disorder when accumulated in an area; can contextually encourage littering or adopting the habit of smoking; or can simply be unsightly wastes. This aspect points out to the environmental and social externalities of unregulated smoking behaviours.



Medical Sciences Block C south yard & IRC east entrance

Photo by: Zahra Hosseini Teshnizi

Beyond the two generally discussed harms of smoking; given the intrinsic connection to health and wellbeing within this precinct, smoking behaviors that violate existing policies or are frequently spotted throughout the precinct also do not align well with the health conscious profile

of the faculty of medicine and the UBC Hospital. UBC Hospital, affiliated with Vancouver Coastal Health (VCH), has outlined its mission to “support healthy lives in healthy communities”, and to “promote wellness and ensure care through education and services” (VCH, 2014). Tobacco reduction has been specified as one of key aspects in serving its mission and in building a environment for healthy lifestyles. Services and education for young adults have also been named as one of the focuses of the program. Moreover, VCH has indicated its strong support for (second-hand) smoking protection efforts and has pointed out that smoke-free places are important health protective measure (VCH, nd)¹. The faculty of medicine has no explicit mention of promoting environmental health as its mandate or its stand on smoking reduction in its strategies. But as pointed out by UBC campus planning, the Health Precinct is distinct from other sections of the campus with the population of patients, patient associates, and health practitioners. The area has and should maintain a character of refuge that is solacing and supporting (Campus & Community Planning, 2014). Thus, it can be seen that unregulated tobacco consumptions are in the adverse direction of the pursuits and contexts of the precinct, which is to promote wellbeing initiatives, and build health-centric environment.

For the purpose of this study, primary goals to be achieved by advancing smoke-free initiatives in the Health Sciences Precinct can be summarized into the following aspects,:

1. To better regulate smoking behaviour and minimize exposure to second-hand smoking
2. To reduce and facilitate proper disposal of cigarette wastes
3. Decrease smoking norms to promote wellness and the precinct’s holistic approach to health²

¹ the details of VCH’s policies and their applicability can be found in session 7a

² Can be seen as a derivative of the first two goals

IV. Case Studies

- A Review of Smoking Policy among Selected Institutions

This section reviews the smoking policies among analogous institutions. This section starts by providing overview to institutional policies and prominent policy promotion programs. Then it analyzes the policies and discusses the most pertinent implications of other institutes experiences. The implications that sometimes points to different directions illustrate the complexity of issue itself, and the trade-offs that can be involved in decision-making process. They serve to establish that potential “best-practices” also require context-specific examination for it to reach the effect intended.

Section outline:

- A. Nearby universities with established smoking regulations (UBCO, UVIC, SFU)
- B. Other institution with noticeable cases (UOttawa, McMaster, Dalhousie)
- C. Institutions where the new UBC president & Dean of Faculty of Medicine used to be (UC, Imperial College of London, NUS)
- D. Main Analysis & Reflections on the Implications of Case Studies

A1: University of British Columbia Okanagan Campus

University of British Columbia Okanagan campus is affiliated with UBC and was opened in Kelowna in 2005. UBCO has its own administration, risk management units, and Health and Safety Committees. It operates on a set of separate guidelines for its community health programs administered by Risk Management Services. Their smoking policies can be found integrated into UBC policy 15 which explicitly deal with the issue of smoking, whereas there’s clear distinction between the two policies. For UBCO,

“Smoking is only permitted within Designated Smoking Areas and is otherwise prohibited out-of-doors within the entire UBC Okanagan campus”

As opposed to UBC where the policy essentially details around regulating smoke-free distances, UBCO's policy more restrictedly prevent outdoor smoking on its campus. Under this policy, the campus has become a big overall no smoking zone, except in its designated smoking areas -- Gazebos.



Figure: Policy notice, source: UBCO Risk Management

The smoking gazebos in UBCO are partially enclosed, roofed structure that looks similar to free-standing pavilions. There were wooden ones and steels ones that are of somewhat similar designs. The gazebos have a roughly 4 meters radius, and are mostly paired with benches, garbage bins and ashtrays inside. There were 7 gazebos when counted in 2012 scatter around campus as noted by UBC insiders. In 2016 as a recent change, one wooden gazebo was removed as it's reaching the end of its lifecycle, and one was relocated. The 6 current gazebos are located in the following spots:

1. Southwest exit of the ADM building, behind the cafeteria
2. Between the Arts (ART) and Creative and Critical Studies (CCS) buildings
3. North of the University Centre building (UNC)
4. Kalamalka residence gazebo (Between Kalamalka and Nicola)
5. Monashee residence gazebo (between Similkameen and Monashee)
6. Outside the ADM building (relocating to)



Photo: @BronwynMaye - UBCinsiders **Most prominent visual of UBCO gazebo³*



Gazebo outside Arts building



Gazebo in between residence spaces

³ according to Risk Management, this wooden unit has recently been demolished due to age



Gazebo near university center



Gazebo outside Administration building



Gazebo south of Administration building

Photos above are obtained through captures of Google Map street view⁴

⁴Photos are based on street survey of Google, thus in some cases they may not reflect the most recent changes



photo: UBC campus planning

The gazebo design can be a functional measure to move forward in establishing big smoke-free areas as it both **restrict and provide** smoking areas. Providing designated smoking areas can be seen as a foundation for implementing campus-wide smoke-free strategy in some cases, as it resolves the potential human right issues with an overall ban of smoking. The human right issue can be seen as twofold:

- smoking remains a legal activity that's adopted by personal will
- smoking can be an addiction that is not easily ceased or suspended, and therefore requires a certain degree of accommodation

Gazebos serve the purpose of provision while also closely regulate smoking activities on campus. The choice of gazebo as opposed to other designs and the placement locations are based on merits that can be examined in detail:

- Gazebo is a roofed structure
 - accommodating smokers and ensuring usage under all weather conditions
- Gazebos are mostly of partially enclosed structures

- provide proper air ventilation, reduce mainstream and side stream smoke accumulating at one location, balancing health and safety for both smokers and non-smokers⁵
- reduce the sighting of smoking from outside
- distinguish from bus shelters etc.
- Gazebos are paired with garbage bins and ashtrays
 - congregate assorted cigarette wastes, minimize environmental impact of smoking and reduce costs of outdoor clean-up
 - one -stop solution for smokers to show compliance and consideration for others and the environment
- A limited number of gazebos have been distributed throughout the campus and are accessible to users within a 100 meter radius
 - proper planning to ensure usage
 - address potential human right issues - not a long walk from any campus buildings, bus stops or residences
- Gazebos are mostly hexagonal steel exterior with maroon roof and signs indicating “designated smoking area”
 - create visual identities for identification and ensure usage
 - distinguish from other structures, a more uniform design can lead the public to percept it as a part of formal policies, and part of the culture on campus

While gazebo design is not short on favorable qualities, it as well as any other designs may not be easily considered as a perfect solution due to the following limits:

- Gazebo roof limits vertical air ventilation, the partial enclosed structure may limits or slow down diffusion of air, thus trapping second-hand smoke or increase its retention time. Potential risks of increased exposure to second-hand smoke inhaled smokers.
 - *according to UBCO representatives, no significant concerns have been voiced to this point*
- Gazebo roof limits vertical air ventilation, therefore might causes smoke to diffuses more horizontally, and therefore spread the impact to adjacent pathways and buildings.

⁵ reduce secondhand smoke inhaled by smokers is an issue that shouldn't be overlooked or “shrugged off”, as second hand smoking can be an imposition for anyone - including smokers. If overlooked, this aspect can significantly increase the risks on smokers' health, and therefore wouldn't benefit overall public health

- *complaints have been voiced by an ADM building-entrance-resident staff that second hand smoke is constantly experienced in the area, even though there's considerable distance between gazebo and entrance*
- Gazebos are relatively large. To avoid interrupting the landscape it's usually placed by pathway instead of in open areas
 - the placement saw a trade-off between aesthetic concerns and risks of exposure
 - the outstanding visual and location may have adverse effect on building tobacco-free normative environment
- Aged wooden gazebo can be of fire risks, and if constantly exposed to adverse weather conditions the structure may rot or lose strength
- Aesthetic concerns - gazebos as being visually highly identifiable structure. Yet some of them has been longstanding infrastructures serving over 10 years, their aging status and prominent look have reported to be inconsistent with campus design guidelines
 - plans of phasing out current gazebos has been bought up by campus planning, due to campus growth and the update of campus planning guidelines in 2015. Plan to approach possible substitutions or alternative designs to gazebo has been outlined as following: *“Develop approach that considers others’ desire for limited exposure to smoking will be adopted, providing aesthetically unobtrusive and compatible infrastructure that focuses primarily on safe cigarette disposal”*. No specific proposal on future location and infrastructure has been put forward to this date.

Primary concerns / ongoing issues associated with Gazebos identified by Campus Planning:

- Locations
- Impacts on campus users (smokers and non-smokers)/ public space
- Potential fire hazard
- Age and aesthetics

Other factors of uncertainties / factors subject to judgements:

- ❖ Relatively large size & distinguished design -- visual identity vs. too prominent?
- ❖ Gazebos are commonly seen as a type of outdoor living leisure structure that may promote social activities inside or around them (varying implications)

- ❖ In order to establish its presence, gazebo design are mostly adopted across campus -- uniformity vs. lack of flexibility vs. what to do with anomalies?



e.g.

- ❖ May be of higher costs in terms of addition, maintenance and relocation
- ❖ Aesthetic

Beyond the design of gazebo that has been established long ago, UBCO has been working on survey the usage of gazebos, remove and relocate, examine conditions, collect feedbacks and demolish undesirable ones, provide associated education programs, and promote its policy on visitors to effectively implement and maintain the designated areas as its best practice. One case of lack of relevant information found related to UBCO's designated smoking area is that there are no readily available maps illustrating the overall locations of the gazebos. The only case where gazebo locations are listed can be found in the location change notice published online in 2016. It may take visitors and newcomers to campus more time to get familiar with gazebo locations.

The overall efforts have proven to make progress in establishing the policy. According to UBCO representatives, the usage rate of gazebo was able to maintain at 70-90%, with a survey distributed by Health and Wellness shows a comply rate of 85%. To elaborate, UBCO implemented several measures⁶ noted below to complement the designated smoking areas:

1. Promotions of gazebos and background policy

- 1) create visual identity through a relatively uniform design
 - 2) identical signage on gazebos denoting designation
 - 3) Giving out coffee card with 'thank you for using gazebo' and did information campaign to invite usage upon installation
 - 4) promoting most prominent image of gazebo using decals and signs throughout campus
- *additional promotion to events, conferences and accommodations

⁶ *measures mentioned by informal interview with UBCO representatives from various departments, with additional research material



Sample signage of UBCO policy

photo: UBCinsiders

- d. ongoing discussions among various stakeholder groups that recommend areas of improvement (an excerpt from University Health and Safety Committee meeting minute shows how recommendations are made: “UBC’s policy regarding smoking is that this campus is smoke free with smoking allowed only in designated areas (gazebos). There are 7 gazebos. It is felt that this committee would like to see improvement to the signage regarding this campus as being smoke free. There may be an area in the covered bus stop that could be used for a map of the campus showing where the gazebos are and outlining the smoking policy. Member of committee recommended that the matter of signage be pursued and welcomed suggestions”

2. Regular re-examination of usage and suitability of gazebos

- a. wellness surveys that include smoking policies were conducted several times to collect information on usage rate and gather opinions on the changes of location - gazebo placements are not without controversies and sometimes the concentrated smoke can spread to nearby buildings⁷
- b. since established, there has been removals of gazebos to minimize risks (remove aged wooden gazebo etc.)
- c. there has also been addition of gazebos, and staffs regularly review if there's need for addition due to campus growth over the years
- d. there has also been relocation of gazebos to ensure compliance and increase utility - under the recommendation from University Health and Safety Committee (alternated locations are determined through "butt counts" that identify the area with high concentration of smoking activities; focus groups / informal interviews were conducted to gather opinion & public observations; campus growth were monitored to ensure gazebos that became within the vicinity of buildings are relocated / removed)⁸

3. Adopt initiatives to inform relevant resources

- a. supplied "cope kits" to users of gazebo, take advantage of the congregation of smokers and supply resources for quitting and cessation (cope kits usually contains small items that help control smoking habit, such as: gum, candies, quit plan etc.)
- b. held contests like "the Great Canadian Smoke Out"⁹ to motivate faculty, staff and students to quit or reduce tobacco consumption on campus

4. Sufficient notice and buffer time given for designated area change or removal

- a. formal notices and a summary of activities and future steps are given to students and staffs through various websites a month before implementation¹⁰
- b. field signs indicating change / transition period solutions

⁷ most recent survey regarding location change can be found:

<https://docs.google.com/forms/d/e/1FAIpQLSfLULQfWReGUY-JdQrRYY8M5T3YjbXdgpLwD-wz5mc2DgUKSQ/viewform?c=0&w=1>

⁸ According to campus Health Specialist: M. Feddersen

⁹ detail of the contest: <http://universityrelations.ok.ubc.ca/publicaffairs/exchange/2005-12-7/smokeout.pdf>

¹⁰notice of change: <https://news.ok.ubc.ca/exchange/2016/06/13/smoking-gazebo-changes/>



Photo: UBCinsiders

These efforts and initiatives combined with a long-term presence of gazebos effectively establish designated smoking areas as a recognized policy in UBCO.

A2: Simon Fraser University (SFU)

SFU is a research university with its core campus located in Burnaby, roughly 25km east of UBC. SFU has also affiliated campuses in Vancouver and Surrey, each with several buildings located in downtown urban settings and by transit hubs. SFU's smoking regulation is introduced by *Safety & Risk Services* department under Environmental Health & Research Safety - indoor air quality section. Representing the commitment to safe and healthy campuses provision and risk minimization, SFU's policy prohibits smoking in all university buildings and vehicles and:

- Within a 10 metre buffer zone of any door or window¹¹
- Within a 10 metre buffer zone of any air intake
- Enclosed spaces (e.g. Convocation Mall, covered walkways, and covered parking lots, transit shelters)

¹¹ Exception being on UniverCity lands smoking is prohibited within 3 metre of doors and windows and 10 meters of air intakes



*E.g. Convocation mall no smoking space - a covered walkway and partially enclosed structure
photo: google map street view*

Under the policy, SFU downtown campuses in Vancouver and Surrey should in effect be no-smoking campuses since they consist of several buildings separated by transit routes that are not owned by SFU. Specifications are made to address smoking in Burnaby campus such as:

- small courtyards will be considered to be "enclosed spaces" to minimize nearby building occupants and users' exposure to second-hand smoke
- provisions have been made to accommodate smokers outside the 10 metre buffer zone, with the map¹² below indicating locations of ash urns and smoking pavilions

¹²SFU [Safety & Risk Services](#)

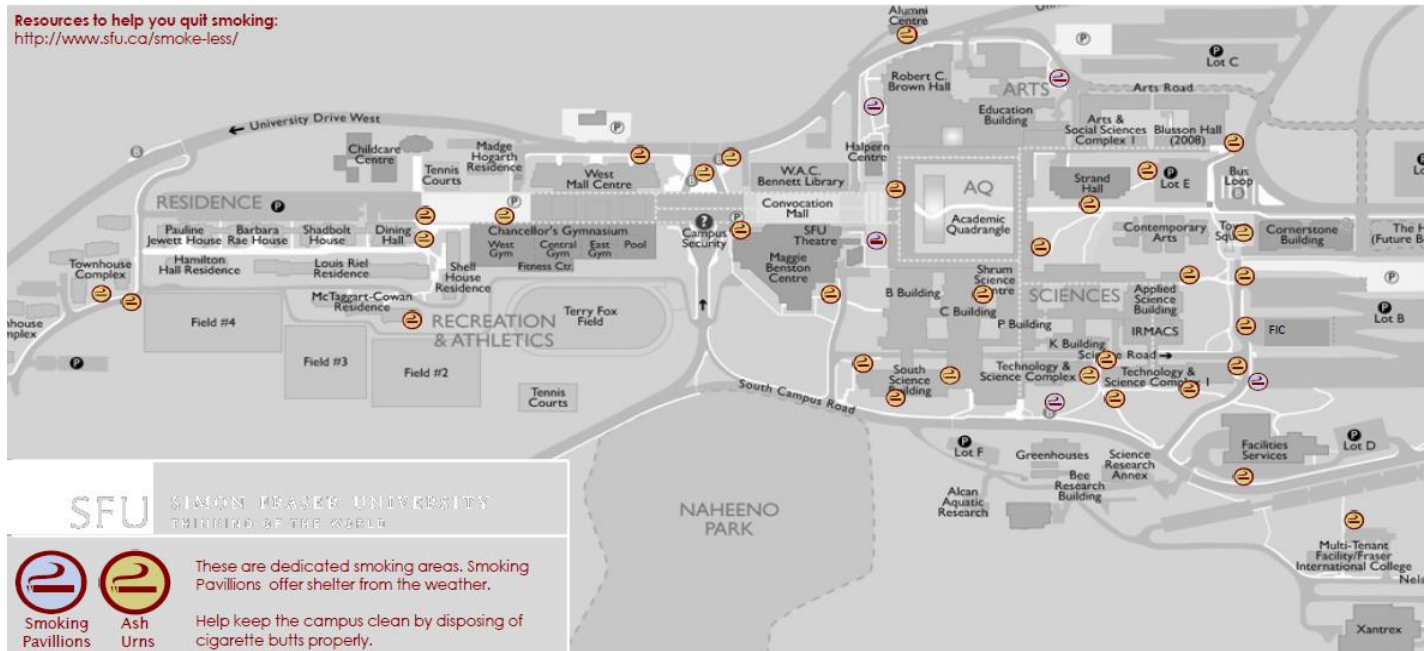


Figure: SFU Smoke-less website

There are 32 ash urns placed around campus, and 5 smoking pavilions functioning as designated smoking area according to the map. Ash urns are grey stainless steel structure that was freestanding and movable¹³, as a result, they didn't work well due to sometime being moved to close proximity of buildings. Since then, the ash urns have been bolted in place to effectively communicate the smoking locations. Some examples of ash urns were found through navigation of Google map street view.

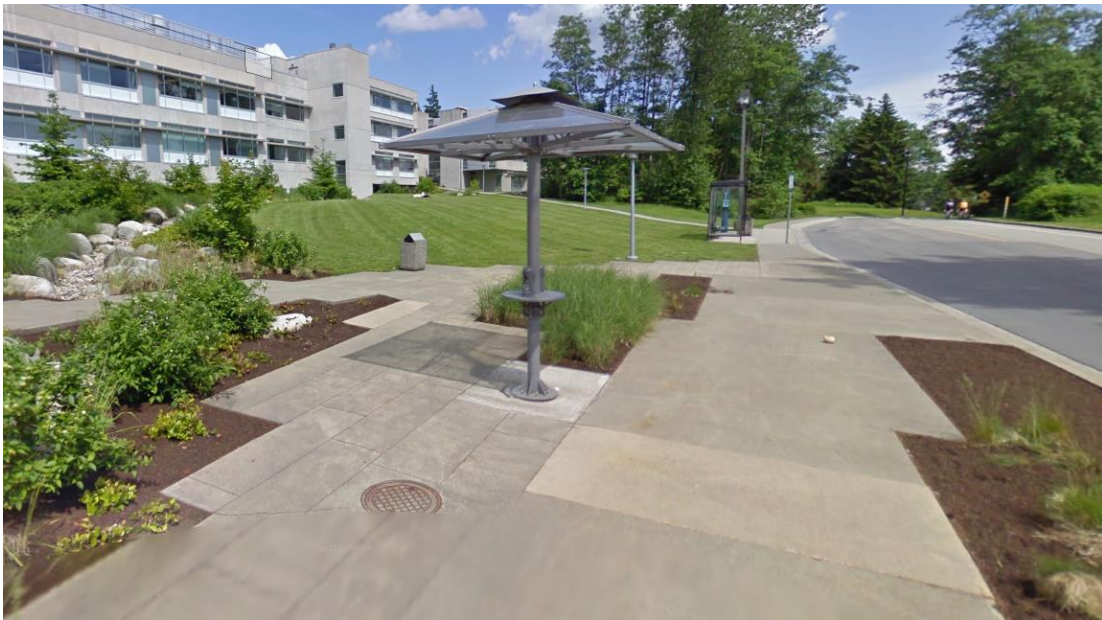
¹³ According to SFU Environmental Health & research Safety Senior Director



Source: Google Map

The situation of ash urns has been found to be mostly according with a signature of SFU building design - the covered *walkways* extended several meters from buildings. The covered walkways are in effect no-smoking areas noted in the policy, while they can be seen as transition zones where smokers coming from outside may want to extinguish and dispose of their cigarette, and move on to entering the building. Thus the location choice of ash urns can serve as a reminder of such transition, and provide proper mean of disposal. They can also direct smokers to move steps away from covered walkway to smoke in open air spaces where second-hand smoke source are away from building, and can be diffused faster. Similarly, placement of urns near bus loop serves more as transition zone reminder - smoking away from bus shelters in open area, and dispose cigarette before getting on the bus. One drawback may be that in adverse weather conditions, people would prefer to smoke under shelters. The presence of ash urns may encourage smoking under adjacent covered walkways.

Alternatively, smoking “pavillions¹⁴” were introduced after noticing the weaknesses of urns. To date, five of them function as designated shelters for smoking outdoor. Some examples are also captured through Google map navigation:



Google Map Capture: near technology buildings

¹⁴ The spelling used by SFU



Google Map Capture: near Brown Hall



Google Map Capture: Around arts road

The free standing “big umbrella” design provides shelter from rain and snow. The visual looks similar to gazebo with only the roof part and a supporting post structure - perhaps looks more like “patio umbrella” than standard pavilions. It’s an open structure with complete open air - diffusion of smoke is increased. Its size is estimated to be 2m*2m, suitable for use of one or more persons at a time.

There are two small cigarette butt collectors paired with each structure:



Google Map Capture

The design is found uniform across various locations, and can be clearly distinguished from other facilities. Placement of pavilion is along walkways or transition zones near major student activity centers - one near bookstore, two in arts “precinct”, and two in sciences “precinct”. The situation of pavilions seems more careful than that of ash urns as they are all on the fringe of building clusters and effectively avoid being near buildings / covered walkways / enclosed courtyards. The smoking pavilions are permanent structures.

There are no signs indicating these pavilions being designated smoking area, small labelling of the structure and collectors can be seen only when approaching the pavilion - may be a passive way to promote the design. The initial promotion of the designated area was carried out by Campus Security carrying maps of campus showing pavilion locations and handed them out to smokers as an education tool¹⁵.

The policy of SFU is marked by its utilizing two types of infrastructures concurrently. With installation of designated smoking area a relatively new move, the compliance rate is said to be varied. It can be seen that smoking pavilion is a favourable move as it carries most of the merits of gazebos, and if location is carefully selected can serves better than ash urns around vicinity of buildings. The twofold policy is reported to be in transition phase right now as there is a *Smoking Policy Review Working Group* in place that is tasked with reviewing SFU smoking policy and recommending changes. It can be foreseen that the direction of future adaptation would be to encourage smoking in designated area, gradually phase out ash urns and situate a few more pavilions. With relatively compact building clusters, a handful of designated area on the relative periphery of campus can direct smoking behaviours away from core activity zones and minimize harm and risks.

¹⁵ According to SFU Environmental Health & Research Safety Senior Director

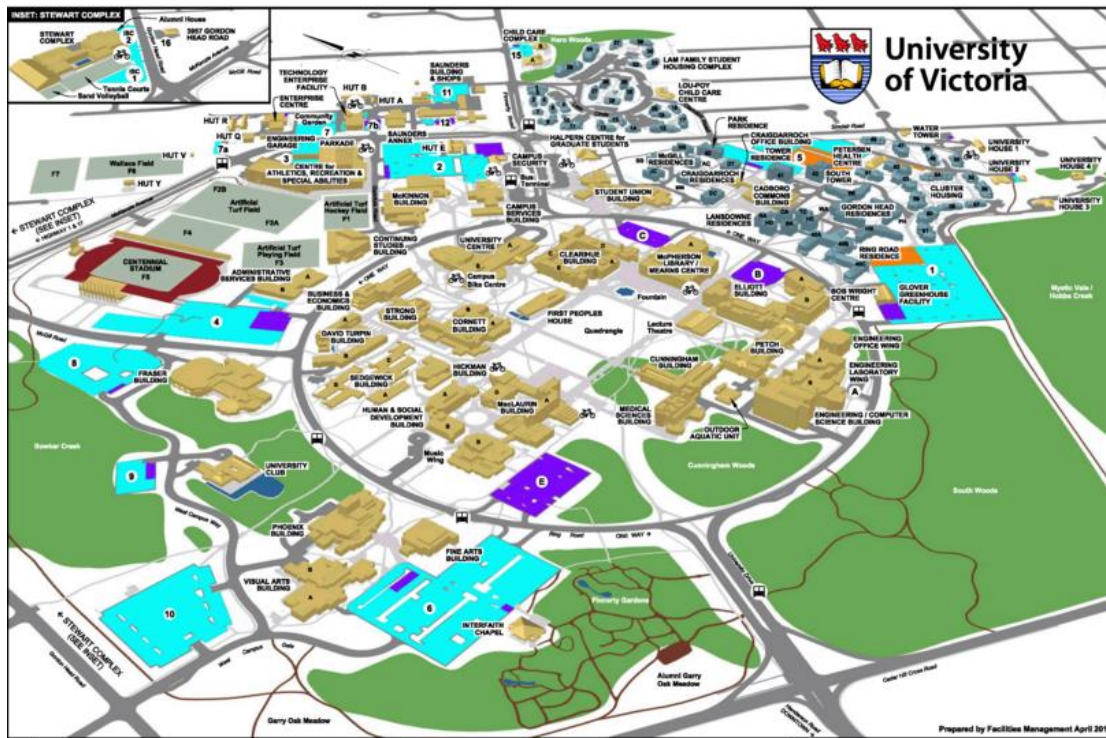
A3: University of Victoria (UVIC)

University of Victoria is a research university situated at Vancouver Island. Its campus has a special landscape consists of a core academic building clusters enclosed by Ring Road, and parts outside Ring Road that are mainly residences and parking spaces.

UVIC’s smoking regulation begins with identifying the priority to control involuntary exposure to harmful substances produced by smoking by restricting smoking within university properties. The content of policy is: Consume of tobacco products is prohibited outside of any designated smoking area on university-owned or leased property including:

- (a) within any university-owned or leased buildings (including all student and family residence and facilities), in any building owned by the University but occupied by other parties, and structures* as identified by signage at the entrance or in the vicinity of the Structure;
- (b) within any university owned or leased vehicle.

**Structures including: outdoor patios; stadium area including seating, track and storage facilities; fountains; bike shelters; bus stops and shelters; and any other fixture as prescribed*



University of Victoria Campus map Source: <https://www.uvic.ca/home/about/campus-info/maps/>

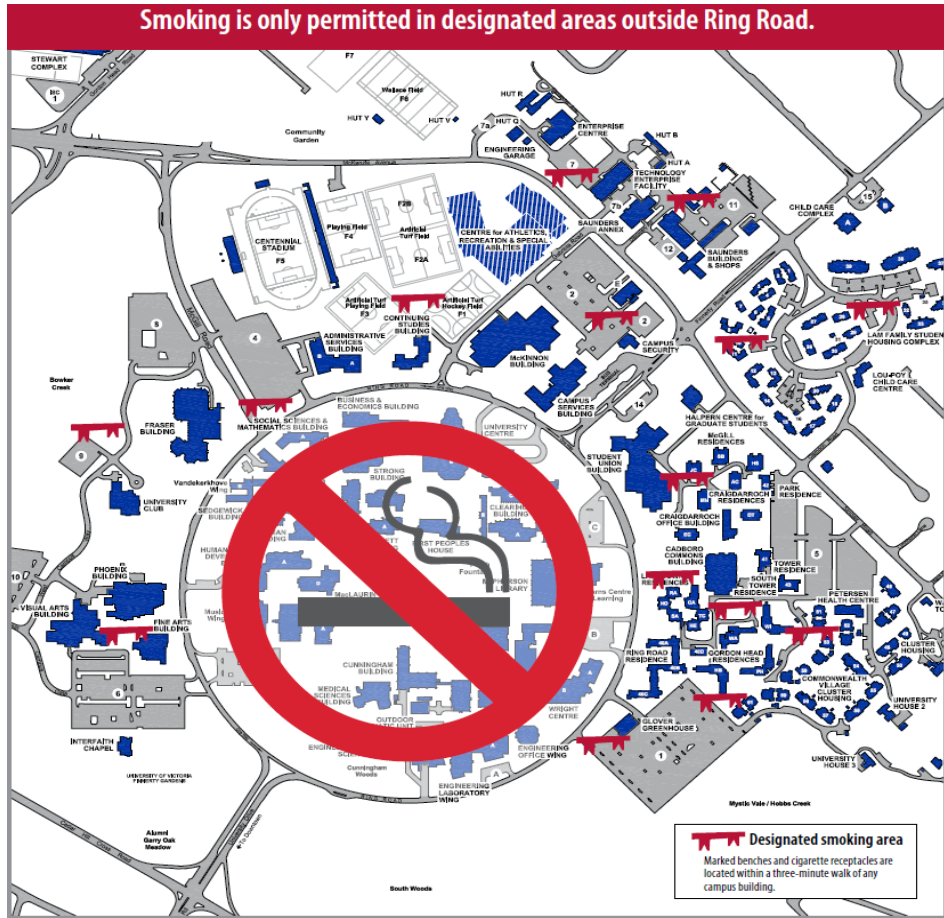


Figure: UVIC Designated no-smoking areas <https://www.uvic.ca/home/about/campus-info/maps/pdf/smoking-map-latest.pdf>

UVIC’s designated area policy has been distinct from others as it was tailored for UVIC’s landscapes. As the central Ring Road area is main consists of academic buildings, a high traffic and a concentration of people can be anticipated in its daily operations. Combined with considerations of minimize second-hand smoking wafting in through windows and vents into workplaces, all designated smoking areas have been being placed outside Ring Road, scattered around buildings of various purposes - academic, facilities, residences etc. The designated areas are marked benches paired with cigarette receptacles. Design examples can be found:



Google Map Capture: near arts buildings



Google Map Capture: near parking lots

Bench designated areas are marked with labelled and a smoking pole and garbage bin can be found accompanying each bench. The design is found to be uniform across campus. Benches can be seen as a form of non-obtrusive design that can blend relatively well into landscapes. It's of much lower cost than other sheltered structures¹⁶ and can be relocated rather easily if needed. Smoking receptacles can garbage bin can minimize litters (butts and packages etc.) associated

¹⁶ According to OHSE Consultant G.Rhodes

with smoking. As a less "eye-catching" design, it can be seen as a less of a distinctive accommodation to smokers, thus can potentially contribute to decrease the norm of smoking on campus. The bench can also be useful to others when no smokers present.

The apparent drawback of benches would be that they doesn't provide shelter to weather. Upon rainy days it can be anticipated that the compliance rate would be low since smoking activities would move to sheltered areas near buildings. Benches are also of higher visibility if located near walkways or in between buildings, thus they won't decrease the presence of smokers.

Similar to other institutions, the policy was written to be 'self-enforced', meaning it was based on smokers' knowledge and conformity of the policy instead of officially enforced. The compliance rate was found to be varied between users, with a higher rate amongst staffs and a lower rate amongst students¹⁷. The main tactics UVIC have used to convey the policy is using signage on building, plus 18 standing signs that are moved around campus on an as-need basis to dissuade smoking within Ring Road and illustrate the designated bench locations. Surveys conducted in the last few years have shown a very high rate of awareness of the policy, therefore the relative low rate of compliance can be mainly attributed to weather reasons and disagreement with policies.

B1. University of Ottawa

Outside of BC, we can turn our attention to UOttawa which is located at the capital of Canada. Its smoking policy is issued by Office of Risk management and a smoke ban can be found as following:

- In all University of Ottawa sports facilities, including the Minto arena and sports field, as well as the Lees Avenue open-air sports field.
- In all food service patios, including Lamoureux, Grad House and the patios surrounding the University Centre
- In Tabaret lawn and patio

¹⁷ According to OHSE Consultant G.Rhodes

Furthermore, Smoking is prohibited within nine meters (30 feet) of a building entrance, ventilation shaft, loading zones and any other designated areas. Some additional information can be found:

- Smoking is permitted in areas not identified in sections 5 to 12; the smoking ban must appear clearly on a readily visible sign posted at the restricted site
- The University Occupational Health and Safety committee can recommend that other outside areas be designated as non-smoking, if they see a need for this
- The University shall provide a prevention and education program for the University community on smoking cessation, prevention and education and on the use of tobacco in general

The smoke-free areas are identified by signage. In 2012, new signs and receptacles were deployed to help identify no smoking areas, direct smoking and to collect cigarette wastes.

UOttawa's policy is similar to UBC's current policy with the main meters-from-building rule, with the inclusion of sports fields and patios as no-smoking zones as an addition. A discussion of UOttawa's online documentation of smoke-free areas can be found in subsequent subsection D.



Figure: sample new signage, UOttawa website

B2. McMaster University

McMaster University has a dedicated policy under Risk Management Manual that details its smoking program implemented in 2007, and most recently approved in 2015. The primary purpose of the smoking regulation was identified to be:

1. To comply with statutory requirements (Smoke-Free Ontario Act 2006 and the City of Hamilton Smoking By-Law No. 02-054)
2. Affirm university's commitment to prevent second-hand smoke exposure and provide healthy environment for students, employees, and visitors
3. To move the university to a smoke-free environment¹⁸

The smoking regulation of McMaster operates similarly with UOttawa's and UBC's with an indoor smoke-ban and a meter rule (specifically 9 meters from entrances / air intakes in this case). There are two additional notes about the policy that are informative and can be reference to decision-making. This includes the existence of a hospital in the university and an absence of stricter policies regulating the area - both similar to UBC's case.

B3: Dalhousie University

Dalhousie University is a public research university in Nova Scotia that has three affiliated campuses. It's reviewed in this report as an university that has the strictest smoking regulation - a radical ban of smoking on the entire campus. The moving to a smoke-free campus came into effect as early as in 2003 for its Halifax campuses, which made Dalhousie the first university in Canada to declare its property 'smoke-free'.

The primary goal of such policy is identified as to protect people from involuntary exposure to tobacco smoke - similar to other universities. The policy is periodically mentioned in university news and is accompanied with numerous programs and campaigns throughout the year to inform newcomers, and strengthen compliance.

Example can be found such as:

- The "smoke-free campus campaign":

¹⁸ <http://www.workingatmcmaster.ca/med/document/RMM-402-Smoking-in-the-Workplace-Public-Areas-Program-1-36.pdf>



Figure: campaign poster

<https://www.dal.ca/dept/safety/programs-services/occupational-safety/smoke-free.html>

- "Breathy easy" campaign

It's easy not to smoke at Dalhousie. There's no smoking on any Dalhousie property – inside or outside.

Dalhousie also is a leader when it comes to creating a scent free environment.

Please avoid wearing scented products. They make some people with asthma, allergies and other conditions very sick.



Breathe easy!

For more information:
dal.ca/smokefree



Figure; online campaign notice

<https://www.dal.ca/dept/safety/programs-services/occupational-safety/smoke-free.html>

- “Student Health Promotion“ offering an eight-week support group program for students who want to quit smoking



Figure: policy notice

<https://www.dal.ca/dept/safety/programs-services/occupational-safety/smoke-free.html>

There are also a number of resources provided for quitting smoking:

Stop Smoking Resources

- [Health Canada - Quit Smoking](#)
- [Halifax Regional Municipality - Smoke-Free Places Act Overview](#)
- [The Lung Association of Nova Scotia](#)
- [The Nova Scotia Legislature - Smoke-Free Places Act](#)
- [Smoke-Free Nova Scotia](#)
- [Stop Smoking Center](#)
- [World Health Organization - Tobacco Free Initiative \(TFI\)](#)

Source: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/smoke-free.html>

The policy has since been recognized by several associations related to health such as Lung Association of Nova Scotia, Heart and Stroke Association of Nova Scotia, Nova Scotia Provincial Health Council etc.

The province Nova Scotia has a smoking by law that details an indoor smoke-ban and a meter-rule. The city of Halifax extend the prohibition to a 5-meter zone from buildings intakes and entrances, the relation of provincial and municipal policy is similar to Vancouver`s bylaw (6 meter) and its relative strictness compare to to BC provincial act (3 meters). The smoke-free policy in Dalhousie can be seen as take a further stride from municipal policy. When first sighting to introduce the policy in 2003, a survey was distributed asking for public opinions regarding to the notion, more than 82 per cent of community members who responded to the survey supported the policy's adoption (Dalhousie University Environmental Health and

Safety)¹⁹. As an indication of strong support from the community, the smoke-ban was adopted and enforced in its campus.

Dalhousie's policy is not strictly enforced. Security officers do **not** give out fines, while they do approach smokers and ask them to move off university property according to various sources. Security also visits the popular smoking areas on all three Halifax campuses to remind the community that smoking is not permitted on university property. **Similarly to all other universities, university generally places emphasis on education and encouraging non-smoking, rather than place penalties on such behaviour.** Over the years, the uniform and persistent policy was said to be successful since it gradually forms the norm of no-smoking around the area. Compliance is not 100%, but community members have generally been respecting the policy.

UVIC Australia's Note:

When researching for UVIC's policies, I came across another UVIC that is in Australia that made a recent move to smoke-free campus starting May 31st, 2016. The primary goal is identified to minimising the smoking-related harm and encourages healthier lifestyle choices to all occupants. Its policy development can be found in <https://www.vu.edu.au/campuses-services/safety-security/tobacco-smoke-free>,

The lesson that can be learnt from UVIC is that the "World No Tobacco Day" which is May 31st every year can be a good timing for implementing new smoking policy.

C1: University of Cincinnati

As UBC welcomes its new president - Santa Ono this year who is recognized as a leader in engaging campus communities and initiate positive changes, it would be interesting to look at the smoking policy of the university he was previously in and see if it aligns the direction UBC wants to pursue. Dr. Ono was the president of University of Cincinnati (UC) from 2012-2016 previous to his appointment with UBC, thus UC's smoking policy and its development is examined in the following.

Informed by the timeline of UC's smoking policy advancement, the university adopted a 7.5 meters away from all university building entrances, exits, windows, air intakes regulation back in 2006. Particularly, there was a mention of "A smoke-free environment shall be provided within the premises of the university of Cincinnati medical center." (UC Human Resources). In

¹⁹ <https://www.dal.ca/dept/safety/programs-services/occupational-safety/smoke-free.html>

2012, the Ohio Board of Regents voted unanimously to make a strong recommendation to Ohio's college and university to ban tobacco products campus wide. In 2015, tobacco-free campus resolution was passed by various campus groups representing various stakeholders. The resolution was then presented to president's Cabinet in early 2016, and President Santa Ono announced the formation of a committee to draft a policy to move forward on the joint resolution. On August 24, 2016, the Board of Trustees votes to ban all forms of tobacco on all campuses as of May 1, 2017.

The steering committees' meeting note documents their discussion on tactics to implement the decision in the upcoming terms and can be reviewed as a reference²⁰. The committee serves to work on:

- Developing a new policy with respect to tobacco use on all UC campuses
- Providing faculty, staff and students with resources for addressing violations in a respectful manner

The committee also manage communication and follow-ups of the policy. Its missions include to:

- Create and manage the communication plan for the Tobacco Free UC initiative
- Engage in dialogue and relevant communications with faculty, staff, students and other non-smokers, ex-smokers, and smokers regarding individual and community wellbeing.
- Determine a plan, with budget, for signage, trash and cigarette container locations
- Minimize the impact on merchants, restaurants, across from and adjacent to campus property
- Identify strategies for use with contractors working on campus properties and *Addiction Treatment and Support* to identify and recommend evidence-based tobacco cessation programs which assist faculty, staff and students discontinue or reduce tobacco use.

(Tobacco Free UC Steering Committee)

The enforcement is relying creating a norm change and gradually makes smoke-free a cultural practice in UC. The vision of policy enforcement is that tobacco free campus is viewed as a shared responsibility of all those in the campus community, tobacco users and non-users alike. And individuals are empowered to respectfully inform others about the policy to support tobacco free initiatives, improve individual health and encourage a culture; with substantiated chronic violations being subject to appropriate disciplinary action. (University of Cincinnati,

²⁰ www.uc.edu/content/dam/uc/hr/bewelluc/downloads/tobacco-cessation/Sept2016_Mtng%20Minutes.docx.

Tobacco Free UC 2016). UC is working to draft a more comprehensive policy and engagement / communication / enforcement²¹ plan as noted by above, and will formally implement the policy in May 2017.

It's can be advantageous to note that the new UBC president has previous experience in advancing smoking policies, more implication of UC's experience is discussed in subsequent subsection.

C2. Imperial College of London

The notion of researching and exploring the possibilities of establishing health sciences area as scope-free was brought up by the Dean of Medicine. Notably, the dean is also new to UBC under a recent appointment in 2016. He was previously involved with Trinity College, Imperial College of London, and National University of Singapore. It would be worthwhile to examine the smoking policy of one of the institution he was in to see if there's a gap between UBC and other institutes and if any reference can be made.

Singapore is a nation with particularly stringent policy on littering and other social aspects in general. NUS has a university-wide smoke ban that's briefly mentioned in its code of conduct, and can be inferred that such policy it's due to the cultural influence. In Imperial college London's case, the no-smoking restrictions are placed on all indoor enclosed spaces, as well as

- Within 5 meters of building entrances
- Outside buildings if close to air intakes / windows
- Anywhere on medical campuses
- On major pedestrian routes, where designated
- In vehicles

²¹ Enforcement scenarios: <http://www.uc.edu/content/dam/uc/hr/bewelluc/downloads/tobacco-cessation/enforcementscripts.pdf>

D: Implications of other institutes experiences

- Is there a “best-practice”?

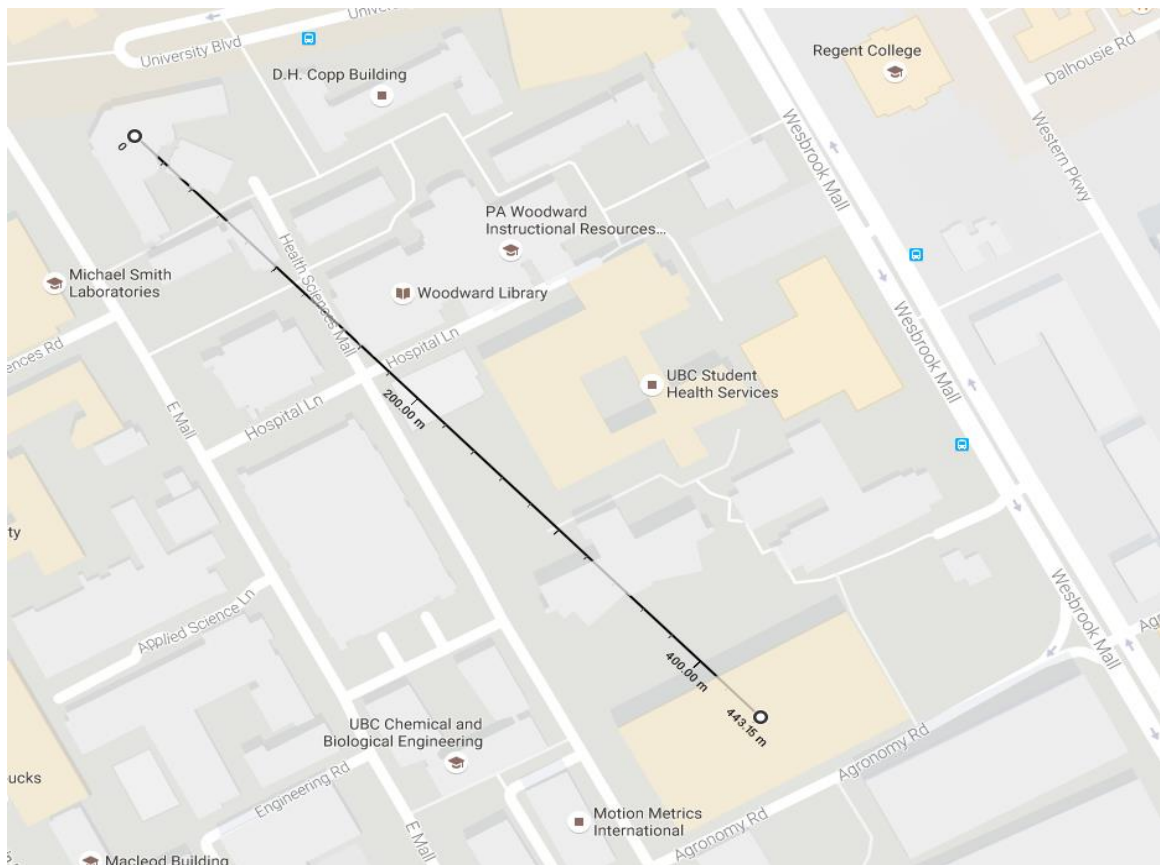
The seeking of best-practice involves weighing the strengths and weaknesses of each method and identifies the one that is most effective and desirable. It was the initial wish of this project to define a best-practice as a guideline for smoking / no-smoking area designations in UBC. However, through discussion above, it can be seen that the policies in each institutes have their pros and cons that cannot be easily normalized quantitatively or weighed qualitatively. It's hard to identify with certainty one policy that can produce results that are superior to those achieved by other policies, due to **complexity of smoking** issue and also the strong **dependency of policies on local land use and planning**. Some rationales and background of other institutes' policies need to be provided, in order to more correctly examine the implication of other institutes experiences. This section situates some of the policies to their respective contexts, and points out to the complication of this multi-scale and multi-faceted issue.

UBCO, as an affiliated campus with UBC, has adopted distinctive policies with regard to the issue of local smoking regulations. Over the years through promotion, revision and improvements, the policy and the designated area method have gain recognition and reported favorable results upon recent surveys. Hence the questions of "Why doesn't UBC Vancouver build gazebos for smoker?" and "Why doesn't UBC adopt the designated smoking area policy?" have been raised by several campus advocate groups as well as *UBCinsides* (a commentary site). In order to provide possible answer to such questions, it's best to first walk through some of the background and groundwork of UBCO gazebo establishment.

The gazebos in UBCO are in fact inherited from Okanagan College when UBC took over the campus in 2005. The gazebos were already a part of the culture and relevant smoking policies have been introduced in company with the infrastructure. Since UBCO take over the place, it was deemed suitable to make use of the policy already in place and adopt associated infrastructures. The policy was then coordinated and being written into UBC policy 15, and a number of gazebos were added, relocated and removed to ensure compliance with the policy. **Thus, the relative success of the policy can be partially attributed to its introduction pre-date**

UBC, and its more than 10 years history of development. This fact signals that designated smoking zone policy can be regionally successful provided with long-term commitment to its implementation and ongoing management. The design may need time to be established and to be recognized by users.

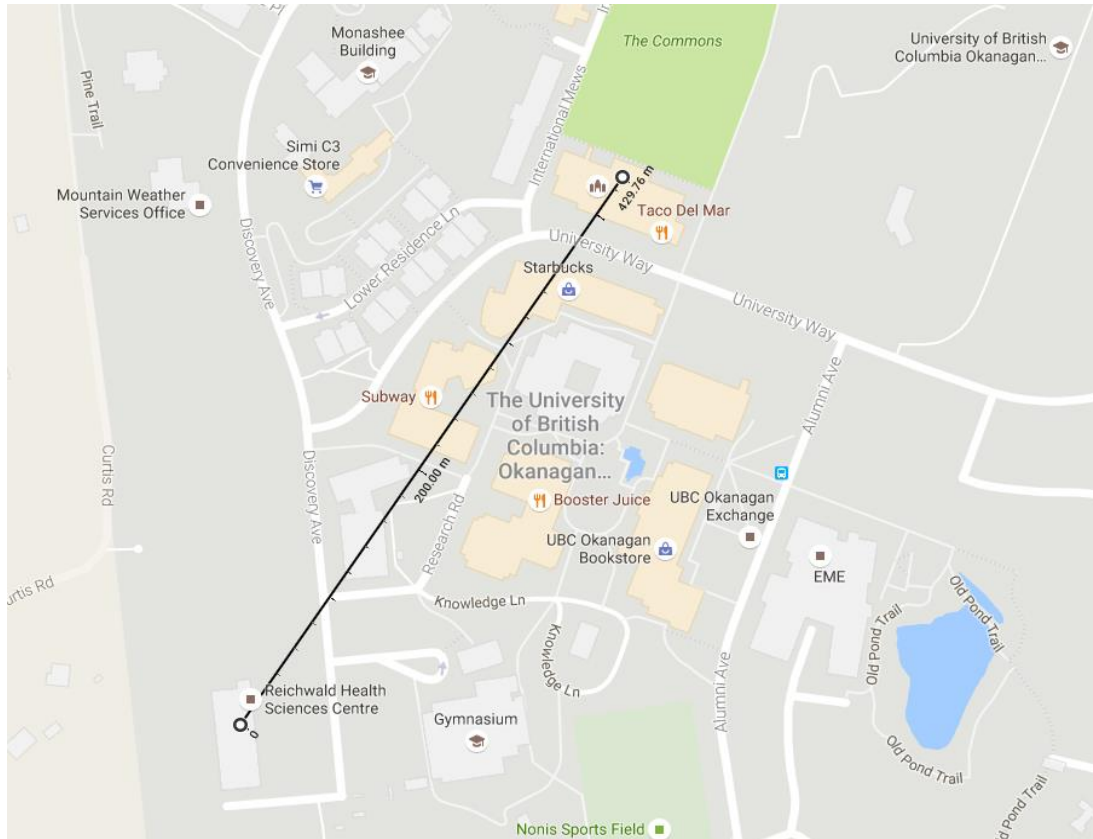
The second aspect of context is the areal scope comparison between UBCO and UBC - namely health sciences precinct²² (the study area). UBCO is considerable smaller than UBC Vancouver campus, and smaller than UBC’s core teaching area. The most telling comparison might be that UBCO is in fact of comparable size of the health sciences precinct:



Distance measurement from Wesbrook to LSC in UBC Health Sciences

capture: google map

²² Detail of this area can be found in subsequent section



Distance measurement from HSC to university center in UBCO.

capture: google map

Although if measuring full areal extent (including sports field, residences, parks etc.), UBCO would be bigger than health sciences precinct (HSP), the measurement across core function areas render a similar result of ~450m in both UBCO and UBC Health Sciences. **The areal scope generate some perspectives on introducing designated smoking area in HSP - UBCO with a comparable size and 10 core campus buildings established 6-7 designated smoking areas and has reported high usage rate;**

- HSP with similar areal extent would possibly want to match the number of designations in order to introduce the designated area policy as a best practice and optimize compliance. It might proves to be difficult for a faculty to introduce this many gazebos at once, thus some alternatives can be sought:
 - establish fewer designations and gradually add more in a multi-stage process
 - Careful selection of placement - one serving multiple buildings / users
 - Remain meter-rule for some area, establish crucial area as smoke-free and establish designated smoking area in its vicinity
 - put more emphasis on the promotion and education activities to ensure usage

Add to areal scope, the difference between levels of land use diversities can also be noted, with UBC, in particular Health Sciences Precinct having a much more diverse land use pattern and range of stakeholders²³. As campus growth taking place in UBCO, there has been ongoing discussion on implement new designs and siting new designated areas to fit a sustainable campus. Therefore, it would not be the best move for HSP to identify gazebos as a best practice. On the other hand, if able to take the chances to explore new designs along with UBCO and campus planning in the near future, it would be beneficial in implementing designated area strategy.

The third context and the one that is considered most important by this report is the **rationale of implementing “designated smoking area” strategy**. It can be argued that the most essential aspect that leads to the adoption of designated smoking zone is **the unsuitability to move the issue to the perimeter**. **“Move the issue to the perimeter”** can be seen as a common measure and also a consequence of implementing smoke-free policies - smoking activities are restricted within or expelled from a vicinity of core protected area and therefore tend to “migrate” to peripheral zones / areas. **The “move the issue to the perimeter” approach can address smoking issues reasonably well in campuses and built environments where there are clearly identifiable core and periphery zones. That is, areas of high density population and high traffic contrast strongly with areas of minimum activities. Furthermore, there should be a low or absence of environmental significance associated with the “perimeter zones” - Valuable Ecological Components (VECs) should be scarce in the area.** By driving smokers away from building air intakes, crowd flows and main activity area, moving issue to perimeter effectively reduce the primary concern of health risks associated with second-hand smoke. However, it would not be the best solution if the “perimeters” are valued ecosystem components or proven to be threatened or harmed by cigarette wastes.

In UBCO’s case, absolute smoke-free campus policy or meter rules are not adopted since the “moving issue to the perimeters” may cause periphery areas to be adversely impacted by the congregated smoking activities. According to UBCO Campus Health Specialist M. Feddersen’s accounts:

²³ Will be introduced in subsequent section (5)

- UBCO campus biologists have noted that the campus is in the centre of a very important ecosystem
- UBCO is a rural campus, thus ‘perimeters’ such as grasslands, highway, forests are all suboptimal locations to ‘move’ smokers to
- Smoking around buildings has been noted to cause cigarette wastes getting into gutters and thus polluting the water supply

These background analyses can serve as essential foundations to justify adopting a designated smoking area policy - as there is a need for smoking activities to be more regulated to balance the needs of various stakeholders. It can be seen that UBCO’s policy is specific to its locale; combining with its inherited infrastructure and established policies, the policy was able to become quite cultural.

Thus when considering introducing the designated area policy, local area unit, land use & stakeholders, current policies & existing infrastructures should be examined in order to design suitable smoking regulations. The most important aspect is to evaluate whether “moving issue to perimeter” measure (existing policies) works for local situation, and if not, **establish that designated smoking area can be a better alternative in achieving primary goals.**

It can also be seen that three proximate universities UBCO, SFU and UVIC introducing designated smoking areas have approached the issue differently, and are using a variety of infrastructure and tactics to inform the policy. Universities have also mentioned ongoing discussions, communications and revision of the policy to adapt to changes. These indicate the importance of introducing situation-specific policies and ongoing managements.

If considering building any types of smoking enclosure (shelter, gazebo, pavilion, booth, kiosk, stand...) on campus, following direction of pursuit and guidelines is suggested to be reviewed by decision-makers, planners and policy implementation personnel to ensure safety and effectiveness of designated smoking areas.

Foremost factors:

- Fire risk
- Building intakes
- Hazardous material storage location

Secondary design guidelines:

- Abide with current local non-smoking policies
- Locate to optimize use
- Provided with shelter, if feasible
- Aesthetic alignment - identifiable & unobtrusive
- Open air
- Identified with posted signage
- Amenities for cigarette disposal

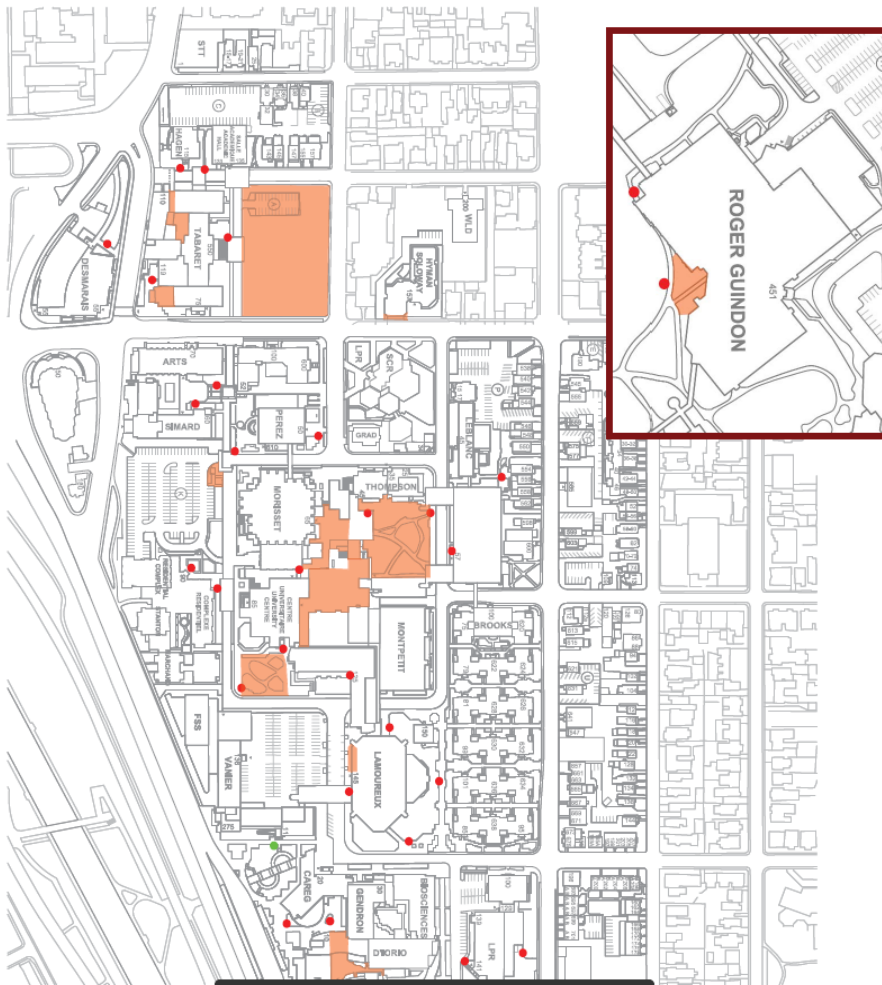
Preferred directions:

- Smaller, more modest design that can align with campus character (campus planning)
- Uniform design
- Effective communication of change - rationale of decision, buffer time, policy notice, field sign²⁴, visual identification etc.

Based on the factors summarized above, the smoking pavilion structure in SFU may be a more appealing design example that would fit into campus master plan better in UBC compared to gazebos.

UOttawa's policy bears much resemblance to UBC's and an observation can be made with regard to the execution of the policy. For example:

²⁴UBCO's example: Temporary signage, paper posters that were displayed on sandwich boards in each of the gazebos, announcing the changes, the timeframe for the changes, and showing the location of the affected gazebos. semi-permanent signage, sandwich board inserts of corrugated plastic, to be placed in the empty location from which the gazebo was moved. The signage announces that smoking is no longer permitted at this location and asks readers to move to the new location. The signage will be placed in the empty location as soon as the gazebo is moved, and will remain there until at least September, to help notify returning staff/faculty/students of upcoming changes (N. Ingram, Assistant to Director - UBCO Campus Operations & Risk Management)



capture²⁵: “map”

Above is a rather confusing map with no labels or legends - presumably illustrating outdoor no-smoking areas and cigarette receptacles - link found on Risk management Office website. The no-smoking zones are illustrated as rather patchy and oddly scattered across the campus. Some can be identified as sports field and specific lawns, while others seem like small areas around buildings that may be assumed to be patios. Red dots may represent smoke poles or ash trays. The map is not a particularly effective visualization of the policy since it doesn't generate a key “takeaway” impression of the policy like SFU's or UVIC's. Lesson can be learnt since UBC's current policy is much like UOttawa's, maps illustrating no-smoking zones should be clearly labelled, and should contain no-smoking zones, designated smoking zones, infrastructures, and temporal variation of the policy (e.g. previous vs. new) where applicable.

²⁵ Full version: <https://orm.uottawa.ca/sites/orm.uottawa.ca/files/map.pdf>

When discussing the main reason to advance local no-smoking policies, the answer is often to **keep up with the advancement of provincial / municipal by-laws**. In some cases, complaints have been noted about smoking near buildings that a stronger policy was needed to be developed. Recent developments have been found mostly in around 2012 when municipal no-smoking regulations bylaws were last revised. Most schools have chosen to go a bit “extra miles” on the smoking issue - developing a slightly stronger policy than the municipal bylaw.

Another thing that can be noted is the enforcement issues. According the discussions with representatives, no institution has mentioned any formal enforcement of smoking policies. No fine has been issued to violators of the policy. Nor regular patrol in smoke-free zones or any consistent monitoring has been mentioned. This is the case for UBC as well. Concerns have been voiced on whether policies would be null when no enforcement is in place. It can be noted in subsequent sections that even on a municipal and provincial level in Canada, formal enforcements and fines have been extremely rare when dealing with individual outdoor smoking violations. Instead, **the design and introduction of sensible policies combine with ongoing campaigns & education programs, and monitoring & communication of the policies should be preferred ways to “enforce” smoking regulations**. Policy development was usually conveyed by signage and word-of-mouth, sometimes combined with e-signage (projection screen messages). It can be expected that if the policy development is sensible, signage and educational programs would be enough to direct the policy to gradually form a culture around campus area; and “public supervision” would be sufficient enforcement.

Similarly in Dalhousie University where general tactics used to broadcast the policy was said to be educational. Dalhousie`s case reinforce the theory as even a university implementing a universal smoke-ban does not enforce the policy with penalties. It can be noted that the policy is conveyed sometimes through a “telling” manner. The favoured method to get the message across is to be more "positive and appreciative", as it depended on the acknowledgement and support from the community to make the policy a success.



Source: Dal news

Other than signage, approaches include student-focused messaging, security officers distributing information on where people can and cannot smoke, and yearly reminders will help ensure that the message stays current and gets exposure to everyone (Dal News, 2011²⁶).



Permanent signage. Source: Dal news

²⁶ <https://www.dal.ca/news/2011/10/24/smoke-free-campus-campaign-kicks-off-today.html>

Promotion of the smoke free policy can even be found in academic calendar:

Smoke Free/Scent Free Dalhousie

To protect people from involuntary exposure to tobacco smoke, Dalhousie has declared the University entirely smoke-free. Smoking is not permitted in University buildings, including residences, or on University property. Those wishing to smoke are asked to leave University property to do so.

The University has also acted to support its many students and employees who report that they are harmed when they are exposed to scents which are present in many scented personal care products. Scents in perfume, cologne, hair-spray, after-shave, and even some soap and fabric softeners, cause serious illness in people who are sensitive to these chemicals. To provide an environment which supports teaching and learning, Dalhousie asks students, staff, faculty and visitors, to refrain from using such scented products while at the University. The scent reduction program is part of a broader effort to limit, to the fullest extent practical, exposure to all chemicals in our buildings.

For more information on the Smoking Policy and the Scent Reduction Program, contact the Safety Office by email at Safety.Office@dal.ca or consult the websites www.dal.ca/scentfree and www.dal.ca/smokefree.

Source: Dalhousie University academic calendar webpage link

Overall, enforcement can be coordinated with campus security and parking officials etc. for them to partake the responsibilities - monitoring / reminding / informing. Rights of enforcement can also be given to individuals, such that senior management, directors or other stakeholders can be appointed to supervise the status of compliance and to remind the policy to its employees / visitors. The policy can also be enforced by general public who may:

- advise violators of local smoking policy / designated areas
- ask violators to move off smoke-free area or put the tobacco product out

On a different note, the overall smoke-ban has been said to successful, while possible critiques to the policy and its lack of transferability to other situation should also be recognized. When justifying for the decision of implementing a campus-wide smoke ban, two main reasons were used:

1. To achieve the goal of providing a safe and healthy place in which to work and study by reduce involuntary second-hand tobacco smoke
2. The public opinion poll shows an overall support of the decision (82%)

With regard to the second point, it should be noted that in Canada in general, the population of smokers is around 20%, with BC being 16.2% (Statistics Canada, 2013²⁷). Thus when distributing a public survey targeting all population asking about a potential smoke-ban, the result can be anticipated as being favourable everywhere in the country. Such result do provide traction to move forward to a direction of tighter smoking regulation, while it potentially omits the interest of smokers and can raise humanitarian concerns - particularly in communities of diverse land-use and stakeholders. The result of the survey may reflect non-smoker's wish to eliminate risks associated with smoking, while it may also reflect statistically biased result of non-smokers on the issue of smoking. Some additional considerations might be:

- Non-smokers who often experience second-hand smoke at one place may have harsh words against smokers in general;
- Smokers are typically classified as "smokers" regardless of how many they smoke (is there usually an amount of drinks for one to be classified as "drinkers" or alcoholic?) → Different smoking habit and amount are often not taken into consideration when considering the behaviour and need of smokers (occasional smoker vs. addictive smokers...);
- Violators of smoking regulation are often seen by the public, while smokers that comply with local policies and smoke away from the crowds are not acknowledged since they are essentially avoiding being visible. There can be biased knowledge of the status of compliance.

These arguments are not to say that surveys are not instrumental in gaining public opinions, while the results should be treated with scrutiny. And the criteria of evaluation should be that: **is there an established need for implementing a stricter smoking policy?** That is, is smoking currently causing harm to others and should be more regulated?

Rather than the number of supports, the questions of the following may prove to be more valuable in determining whether to advance smoking policy:

- Is compliance of current policy high?
- If yes, is there evidence of second-hand smoke still being an issue around the region? If it due to a too-tolerant policy or low compliance / low awareness?

²⁷ <http://www.statcan.gc.ca/pub/82-625-x/2014001/article/14025-eng.htm>

Is current policy effective in regulating smoking? / If well-enforced, is the meter-rule already effectively minimizing the risks of second-hand smoke exposure? (Should we focus on enforcing, promoting, educating current policy rather than developing a new one?)

- If second-hand smoking can't be identified as a prevailing primary issue, is there other issues that call for a stricter policy?
- Do smokers of various need have valid arguments against a stricter policy?

The implication is that, the argument of: “if most smokers are complying with current policy and second-hand smoking is not reported to be an issue, there’s not much justification for adopting an overall smoke-ban” can reasonably refute a potential adoption of smoke-free policy. Thus, alternatives to a smoke-ban can be more sought after, options include: establishing designated smoking areas, appoint managements and officials to enforce current policy, advocate for current policies, clarify the applicability of current policies and unify different policies etc. Or, other strong objectives other than regulating second-hand smoking should be identified and acknowledged by the public.

Imperial College London’s policy resembles the meter-rule of UBC among other universities. The 5 meters zone and the relatively ambiguous “outside buildings if close to air intakes / windows” can be seen as not as strict as UBC. The ban of smoking on all medical campuses, on the other hand, is an extra initiative of the university. The presence of such a policy in Imperial College London may be the reason why there are rooms to pursue stricter policy in UBC hospital surrounding area. In this case, it should be noted that UBC Health Sciences Precinct is a spatial scope that’s much larger than hospital vicinity area and involves multi-land-use patterns and stakeholders. If considering placing a smoke-ban, it would be more suitable and effective to identify the area associated with health-related value as smoke-free zone. The cases of ICL and McMaster University calling for a stricter no-smoking policy in hospital vicinities can be a justification for change in UBC

Two additional findings with respect to McMaster's situation are:

1. On the "Leave The Pack Behind" website which is a tobacco control program funded by the government of Ontario that offers young adults smoking and quitting information, personalized support, and quitting resources, McMaster "Tobacco Policy" is documented and is described as "actively discourages the use of tobacco products" and "encourages the imposition of more restrictive policies". This direction of pursuit is not explicitly found in McMaster's "[Smoking in the Workplace/Public Areas Program](#)" policy document, but can be considered as a derivative of the policy that paved the way for future policy development and local pursuit of a stronger policy.
2. McMaster, similarly to UBC, also has an affiliated hospital located on campus. UBC hospital is operated by Vancouver Coastal Health (VCH) and McMaster Children's Hospital is part of Hamilton Health Sciences (HHS). Both health care service network (VCH and HHS) has a ban on smoking on its properties. (As background, as of January 1, 2016 across Ontario, it became against the law to smoke on hospital property, and a minimum \$250 fine can be issued by municipal bylaw officers.) McMaster hospital is located on McMaster University property and the university owns the site, so while there's no doubt that indoor smoking is prohibited (effective under both policies), there's some grey area around borders for outdoor smoking which are regulated differently under different policies. Similar situation applies to UBC. **It's essential to avoid overlapping and ambiguity when multiple policies are in place for an area. A clear definition of the scope and applicability may help to confirm each regulation, eliminate confusion, and appropriately allocate responsibilities of enforcement.**

For example, in university's policy, **a note can be added saying "if there is a discrepancy between this policy and policy posted locally, the local posted policy prevails"**. This would allow stricter policy to be imposed by the hospital if it's deemed as needed by hospital representatives. **While doing so, humanitarian factors should be taken into consideration,** a few factors can be outlined here for an inclusive policy design:

- patients of long-term addictions reside in the area,
- patient relatives or other person involved who are under pressure / anxiety that smoke as a relief measure
- patients of mobility constraints or disabilities may find it hard to move away from hospital to smoke etc.

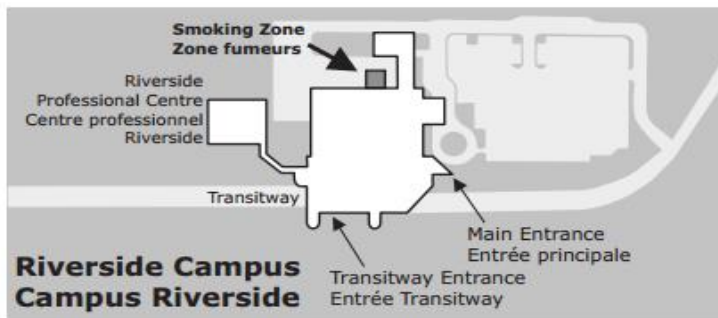
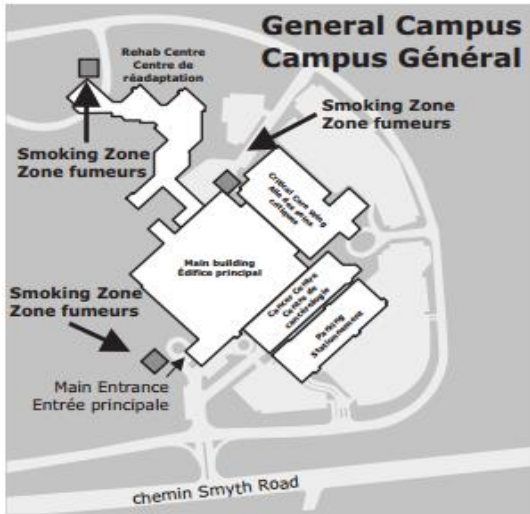
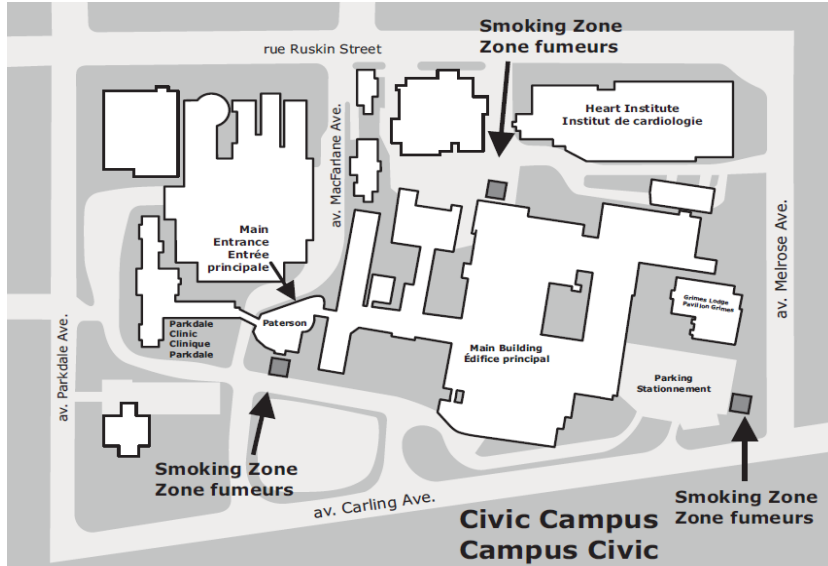
Given these factors, it can be seen that establishing the entire hospital area as smoke-free outright may not be a easy one-stop solution. The designated smoke / smoke-free zone strategy can be considered as an alternative. If there's suitable area around hospital that can be assigned as designated smoking area, it may allow a wider smoke-free zone to be established around the hospital. Suitability can be considered as

- Within vicinity of hospital (<500 meters)
- Able to host appropriate infrastructures and signage
- Abide with local no-smoking policy (away from entrances, air intakes etc.)
- Located in relatively low profile site etc.



Photo: locally defined designated smoke-free zone (botanical garden, UBC)

The botanical garden's case can be seen as a sensible design of smoke-free strategy. Using a combination of smoke-free zone and designated smoking zone, the strategy provides venue for smoking while directing the activity to relative low-impact zone. Visitors can see the rationale behind the strategy which is to protect vegetation and to prevent fire hazard. High rate of compliance is observed for such designation.



<https://www.ottawahospital.on.ca/wps/portal/Base/TheHospital/QualityAndSafety/PatientSafety/SmokingPolicyDesignatedAreas>

UC's recent move towards a smoke-free campus is a very favourable case and can provide traction for UBC to pursue the same direction. This is due to link of President Ono being the administrator overseeing the process, as well as the policy initiation process which can be relevant in Health Sciences Precinct's context.

Firstly, the development of smoke-free policy in UC forms around its medical centers. Back in 2006, the university has called for a smoke-free environment to be provided within the premises of the university medical center. UC's medical center within is an area of a cluster of hospitals, care centers, and research units - similar to parts of health sciences precinct in UBC. The area is dominated by health-related activities and is located some distance away from other main academic buildings - forming the distinct spatial character of its own. Amongst the reasons of "going smoke-free", apart from dealing with the issue of second-hand smoking, the factor of local health-related pursuit has been explicitly mentioned as a reason, with quote: "since the university has substantial commitments to health-related research, teaching and patient care. Thus, the university community has a particular obligation to be sensitive to health-protection issues" (Tobacco Free UC, 2015). UBC Health Sciences Precinct has the same situation and context of pursuing a stricter policy, thus citing UC as a model and referencing its strategy can be beneficial in making the case for the decision.

It can also be found that there are several other American universities and schools that have designated medical centers and hospital surrounding area as smoke-free zones on campus, examples can be found such as:

EXAMPLES OF HEALTH PROFESSIONAL/MEDICAL INSTITUTIONS

- Stanford School of Medicine (California)
- Brown Alpert School of Medicine (Rhode Island)
- Penn State Milton S. Hershey Medical Center (Pennsylvania)
- University of South Florida - Health Sciences (Florida)



Figure: stanford school of medicine smoke-free zone policy map, Source: <http://med.stanford.edu/school/campus/tobacco-free-campus-policy.html>

These previous cases made it a more justifiable top-down decision to impose stricter smoking regulation on land that has intrinsic association with health. Further consideration should be incorporated for patients with disabilities or who claim to have an addiction. “Buffer period” can be established to collect public opinion, campaign, and raise awareness of policy change when introducing a new smoke-ban. Adequate signage and infrastructure should be in place to complement the implementation of revised policy. Relevant information and programs should be made available as resource for smokers to cope with smoking cessation.

It can also be noted that UC’s policy development is followed by extensive stakeholder consultation and engagements. Student, staff and faculties associations have been brought into conversation to provide public opinions from various angles. On top of public opinion poll and conversation with representatives, further consultation should be made with professors / researchers... with insights and possible solution on dealing with smokers with special needs. In UBC’s case, stakeholder engagements can be expected to be an unavoidable process since it hosts such diverse communities - Health Sciences alone is home to various research units, care centers, hospital which is operated by VCH, academic buildings, library, commercial mixed use buildings, parking lots and open spaces. After developing a preliminary strategy of smoking policy development, stakeholders should be consulted to refine policy according to voices heard, and ultimately gain supports and approval of policies before its implementation. Persons with addiction or difficulties complying to the policy, and

professionals with knowledge dealing with smoking addiction and cessation can be additional sources of information.

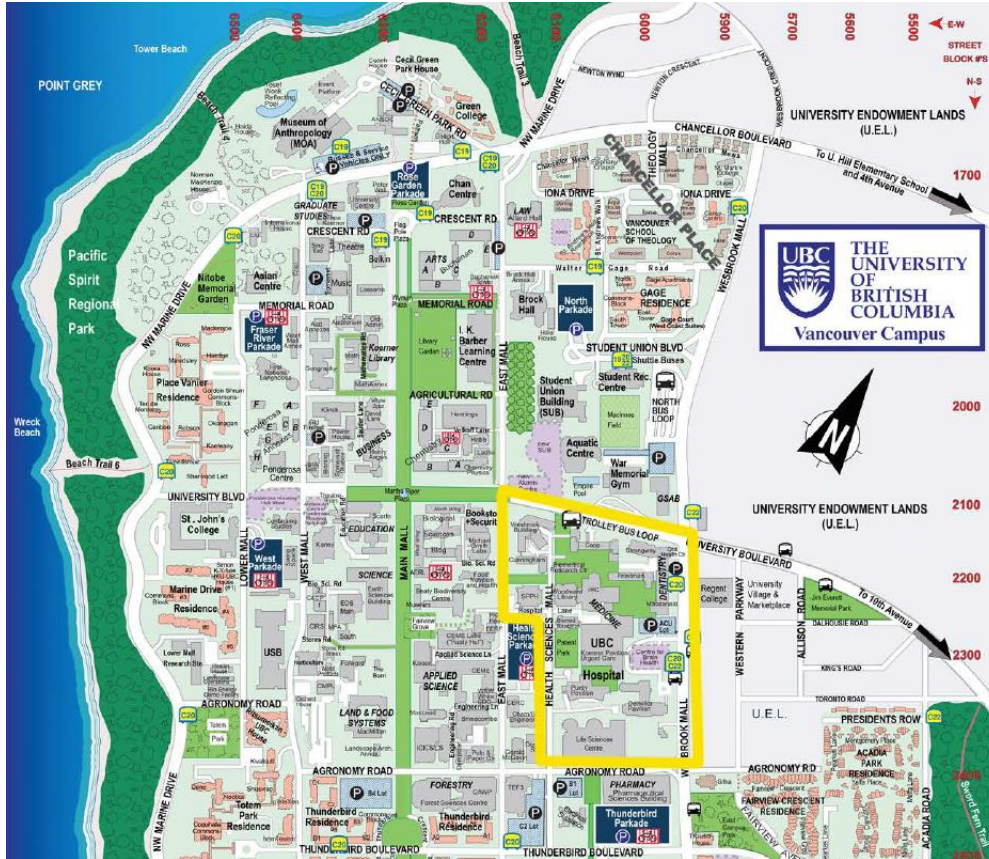
V. The “Health Sciences Precinct”

Health Sciences Precinct (HSP) which includes the area surrounding UBC hospital was identified as the area of concern for this project. While preparing for field studies in the area, it has come to my realization that the exact boundaries and the spatial extent of the HSP should be defined as this is crucial to clarify the project scope. Upon investigation however, it was discovered that there is no formal definition of the area or its encompassing. The sole source that refers to the hospital surrounding area as a “health precinct” was a campus planning public realm design document. While the discussion in the document focused on three courtyards or open spaces in or around the hospital area and several maps are provided to illustrate the relative scope of the “precinct, no formal spatial extent is delineated for the “health precinct”.

The lacking of spatial scope information was then brought to the project team’s attention. It was confirmed that “health sciences precinct” is a customary name given to the area surrounding UBC Hospital and it is not a formally recognized administrative unit within UBC. After discussion with project team, the extent of the “health science precinct” was determined to include all buildings that have FOM affiliated members reside in for the purposes of this project. A list of buildings that constitute the precinct was compiled. The HSP centered on UBC Hospital, and consists of 15 buildings (12 operated by UBC, 3 by VCH), and 3 major open green spaces:

- Health Sciences Courtyard
- Dentistry Courtyard
- Patient Park

Based on the information, the following map was made to show the situation of HSP within UBC Vancouver campus main academic campus:



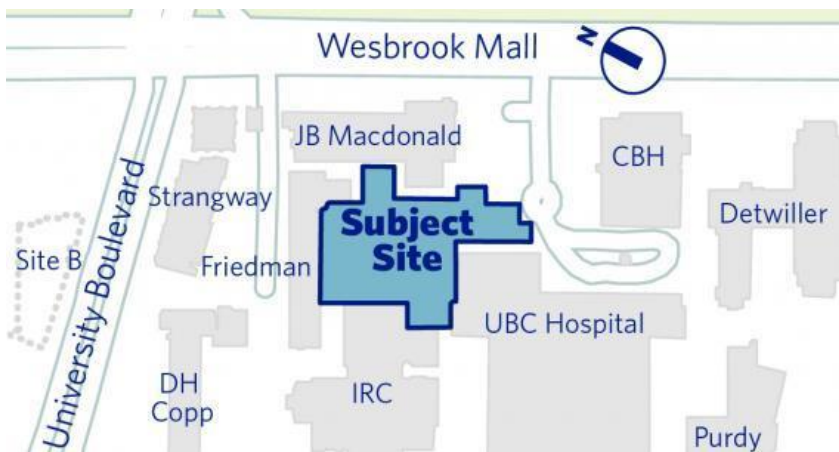
Base map: UBC campus planning



Figure: A blow-up map showing buildings within HSP



Figure: A blow-up map showing Health Sciences Courtyard and Patient Park
Source: UBC Campus planning public realm improvement document



Spatial reference to Dentistry courtyard under construction (Sep, 2016 - Feb, 2017)
Source: UBC Campus planning

“Health Sciences Precinct” is only an *informally* defined area, but the definition can be justified to a certain degree. In a similar fashion, University of Tasmania defines Health Sciences Precinct as an area that “brings traditionally independent medical research organisations, universities and health care providers together as one unified group” (University of Tasmania, 2014). The HSP in UBC also represents the unity in a way that a variety of groups associated with medical research are closely located as a cluster within the precinct. This “cluster” includes UBC schools and centers, research units, biomedical research units, hospital, care units, dentistry faculty, brain health research center etc. These groups are tied together by health-centered mandates, and work together to advance medical research, facilitate knowledge translation, and deliver benefits to the community. Thus, an association, a partnership and a network have been established in the area to justify for it being a “Health Sciences Precinct”, and to give grounds for the area’s ongoing pursuit of health-related value promotions.

On the other hand, the designation is not without dispute since some commercial-academic mixed use buildings are also included in the precinct. It can be anticipated that spaces rented out to commercial retailers are not administered by the university and do not have a tight association with health sciences. Even if the mixed use buildings are not taken into account, buildings in HSP hosts diverse groups of stakeholders that does not fall under the administration of FOM. For example, SPPH and JB Macdonald are respectively occupied by School of Population and Public Health, and Faculty of Dentistry. Moreover, the hospital and pavilions are operated by Vancouver Coastal Health (VCH) via lease agreement with UBC; Brain Center’s occupation is also shared between UBC and VCH etc. The delineation of HSP to include these buildings represent more of a conceptual zoning based on connections than that of strict administrative / political boundaries. Hence, it might be questionable as for whether associated stakeholders residing in the area acknowledge the concept of HSP, and conform with FOM’s policy leadership.

Stakeholders

The HSP is a space of diverse occupancy, land-uses, stakeholders, and administrations. The need to clarify on the jurisdictional structure of the HSP is emphasized by planners, because if one individual unit does not hold overall administrative power of the HSP, then approval from local representatives have to be obtained before proceeding with policy implementation.

Thorough consultation with a wide range of demographics and conversation with multi local health committees (LHS) are needed to pursue sustainable smoke-free policy. With regard to HSP's case, the Local Health and Safety Committees (LHSC) residing in each of the buildings within the precinct are identified as key stakeholders. Policy proposal and stakeholder consultation are expected to be conducted prior to implementation in order to ensure a uniformed understanding and good compliance of the future policy. Consent can be obtained, or disagreement should be addressed during the consultation in order to gain traction for future policy development and implementation. Upon consultation with UBC Risk Management Services Safety Program Advisor, the following stakeholders (LHSC) are identified as potential stakeholders²⁸:

Brain Research Centre and Centre for Brain Health	Purdy Pavilion (UBC Hospital)
Dept. of Anesthesiology, Pharmacology & Therapeutics (APT)	Medical Science Building Block C
Dept. of Pathology & Laboratory Medicine	Korner Pavillion (UBC Hospital)
Dept. of Psychiatry	Detweiller Pavillion (UBC Hospital)
Friedman Building	Friedman Building
School of Nursing	UBC Hospital (Korner Pavilion)
Faculty of Dentistry (Intranet)	J. B. MacDonald Building
School of Population and Public Health (SPPH)	Library Processing Centre
College of Health Disciplines	Woodward Instructional Resources Centre

The information provided above should be considered as a reference and further confirmation is needed from Safety Program Advisor once the scope of future policy is

²⁸ Detailed contact information has been given to project team but excluded in this report due to privacy reasons.

proposed. Other clusters of decision making / planning / executive stakeholders should also be taken into account which includes campus planning, building operations, university administrators etc. Policy alteration or establishment of large scale smoke-free zone will need to go through university administration unit for final approval. A reasonable policy proposal will need be developed before engaging with all stakeholders within or out of the precinct, and the FOM will act more like educator and discussion facilitator to lead the process. In order for the proposal to be sensible and convincing, it should be based on either:

- Solid reasons / grounds established for policy advancement (e.g. a large number of complaints associated with second-hand smoke, precinct-wide non-conformance of current policies observed, or uniformed recognition of the need of stricter standard to align with health-related mandates...)
- A reconsideration of scope - that is, if there are no “precinct-wide” concerns noted with smoking or if the notion of “HSP” is not well-recognized, it’s suggested that FOM instead identify “hot spots” of non-compliance and areas of top priority in dealing with smoking issue (e.g. parks...) and concentrate on reinforcing smoke-free practices in these places. The reinforcement can be based on reemphasizing current policies through signage and programs, or establishing specific smoke-free zones inside the precinct instead of declaring the whole area smoke-free.

VI. Field Studies

A. Smoking Hotspots & Areas of concerns

As mentioned in previous section, in order for the policy to be inclusive, realistic and convincing, it might work better starting small and focus on tackling key areas of concern. Also, to bring the issue of smoking to a local focus, patterns of smoking in the area and current compliance status should be mapped out to enrich the context of policy advancement. Therefore, a field study is carried out in collaboration with Marcus Jung to conduct cigarette butt count within the precinct. The figures collected can be used to illustrate “hotspots” of smoking. Other observations are stated as references.

The field study was done one time in Aug 2016. A limitation here is that the butt count campaign cannot simply be implemented as a “longitudinal study”, and thus may only represent butt distribution at a specific time. One reason behind this is the varying ground cleaning schedule within the precinct. There is no fixed cleaning schedule and the clearing scopes and times are not documented by Building Operation. Therefore, it would be hard to repeat the study to see how butts accumulate through time, as some areas might be cleaned and some might not be. Combined with the varying weather (rain, snow) reason and closure of dentistry courtyard, only one detailed field study is conducted for this study and some casual observations were made later on. The following illustration is produced based on the butt count to show the “hot spots” of smoking and policy violations within the precinct.

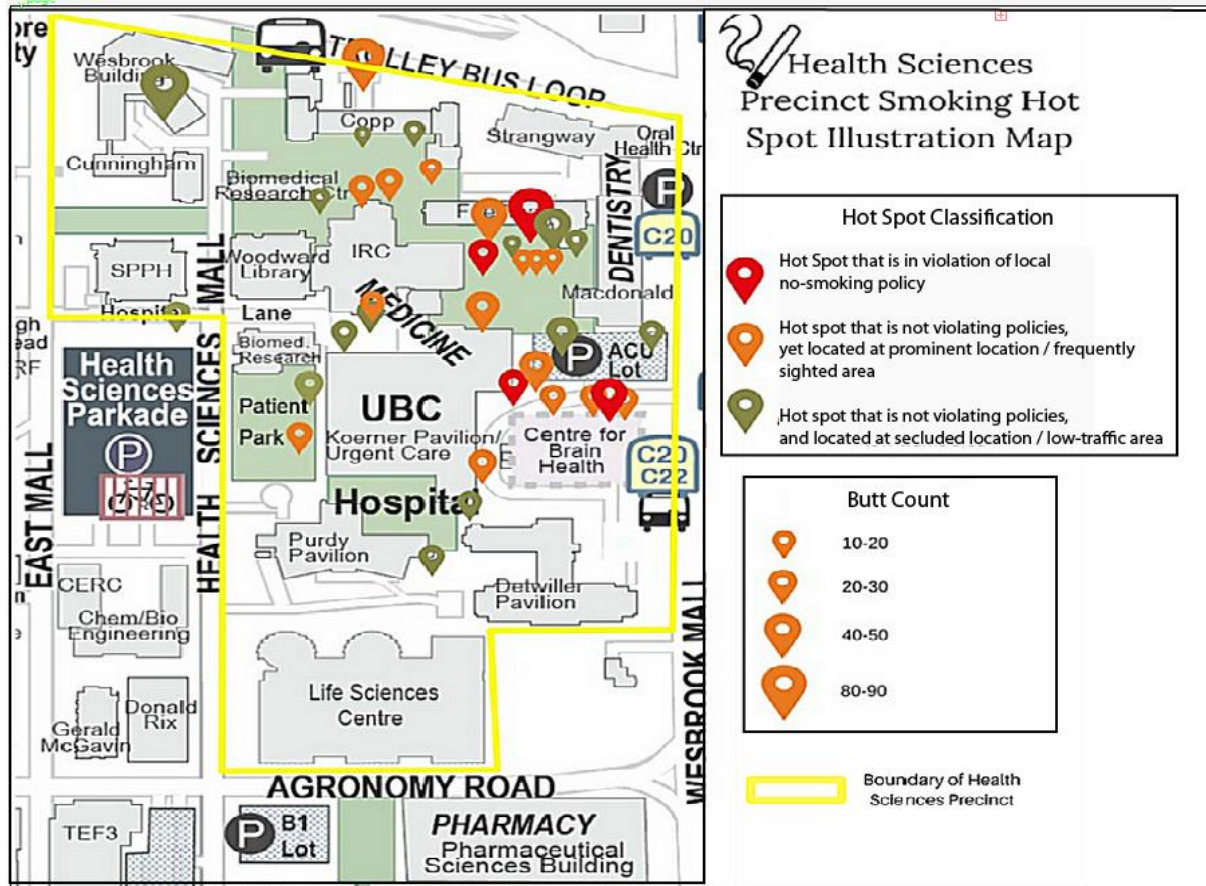


Figure: a one-time butt count results

As can be seen in the map, prominent hotspots are primarily located around Center for Brain Health front area, and in Dentistry Courtyard near Friedman building. A high butt count near building entrance has been observed for Brain Center front entrance, as well as Instruction Resource Center (IRC) east entrance. These two spots account for major violations of the policy. Another spot that’s in violation of “local policy” is located near Friedman building in dentistry courtyard. High butt count was observed near the three benches which are located near the building entrance. **The no-smoking signs labelled on the benches don’t effectively prohibit smoking at this spot.**

Aside from notes above, a general good status of compliance has been observed around building entrances, doorways, and air intakes in the area. Particularly, there were barely any butts around Purdy and Detwiller Pavilion, Life Sciences Center, and Dentistry building.

Other “hotspots” of smoking that are not in policy-violation zone are found mainly around dentistry courtyard, hospital parking lot, hospital lane, and health sciences courtyard.

These hotspots are often not in violation of smoking policies and are located at rather low-profile locations. For example, the major hotspot behind the Wesbrook Building with butt count over 80 is at a discreet location. The high butt count can be a result of a lack of cleaning over an extended period of time. Similarly, hotspots near Copp and Friedman were in some cases surrounded by bushes, garbage, or piled up with autumn leaves.



Photos: major discreet hot spot near Wesbrook building

It can be argued that these “hotspots” are reinforced by the “**broken window effect**”. The broken window theory describes the signaling effect of poorly maintained environment on more chaos and disorders (Kelling & Wilson, 1982). In an isolated, anonymous, low-profile location, with few or no other people around, individuals look for signals within the environment to adjust their behaviours and attitude towards social norms. The messy environment can generate a “mental allowance” for undesirable social behaviours due to a lack of “peer monitoring”.

The high count of cigarette butts that constitute to unsightly litter in these places tell a two-side story about smoking - one is that smoking in such places in effect minimize other’s

exposure to second-hand smoking; the other is that the environmental externalities of smoking can be high due to “broken window reinforcements”. It can be argued that instead of banning smoking in these areas which might drive smoking to more high-profile locations; and might achieve poor compliance, a better-maintained landscape can communicate more proactively with regard to environmental behaviours, and minimizes “broken window effects”.

Alternatively, placing smoking poles in these areas to collect cigarette butts and direct smoking activities can be a reactive solution. Examples of this accommodating measure have been found across campus. One such example is the newly redesigned green space in Marine Drive residence which uses both strategies to reduce the harms of smoking. An overall well-maintained landscape combined with the addition of smoking pole near benches direct smoking away from buildings and collect wastes.

Inside the precinct, the newly renovated Health Sciences Courtyard and Dentistry courtyard have the greatest potential to establish similar “environmental messaging” effects.



Photo: the well-maintained landscape of health sciences courtyard, few butts have been found



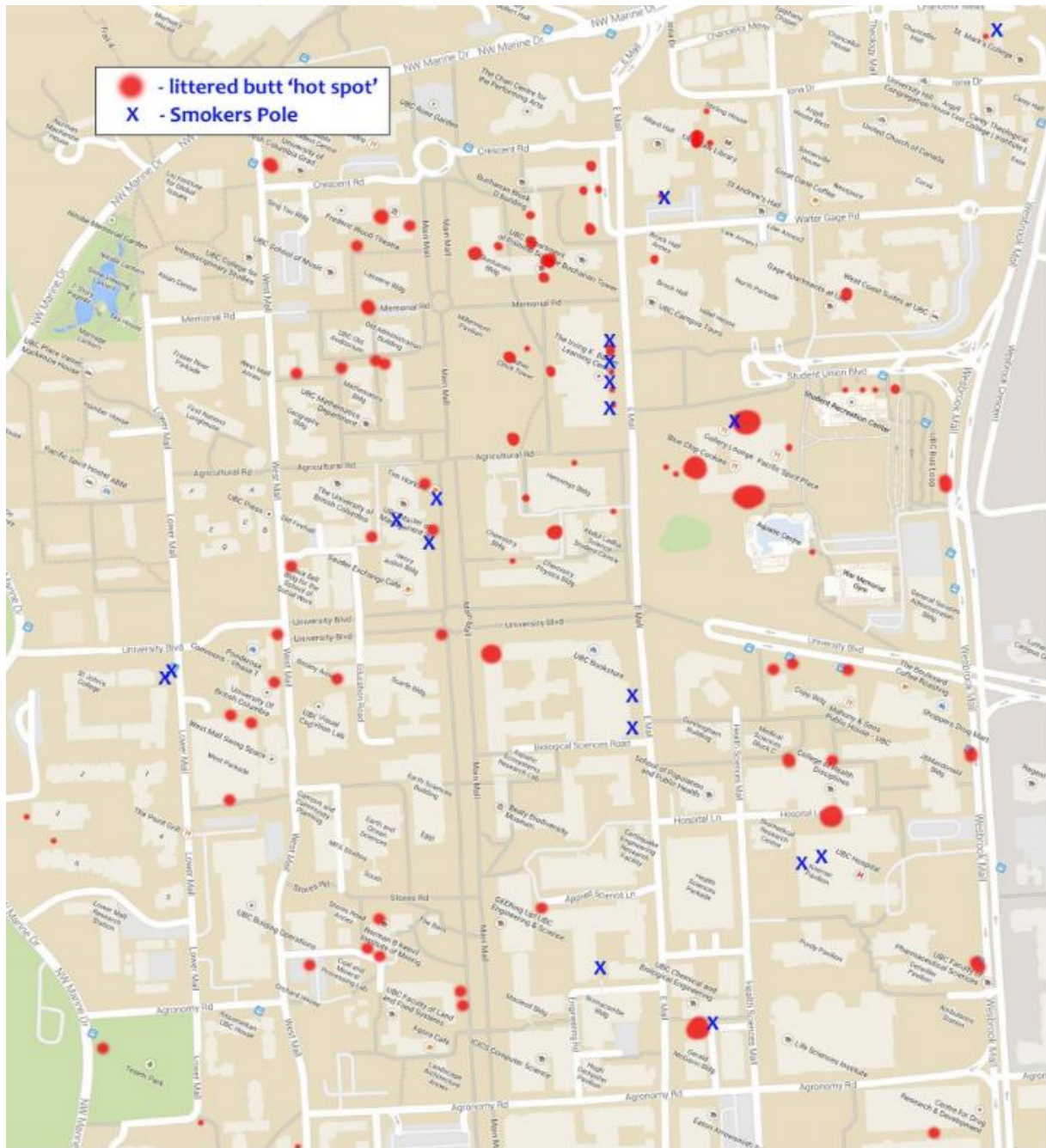
Photo: newly renovated space in Dentistry courtyard with new public amenities and no-smoking benches, better compliance has been noted compared to periods before renovation

Discussion: Smokers' Pole

There have been arguments against the addition of smoker pole that it might actually encourage smoking in an area. The various social dimensions of smoking should be taken into consideration when adding smokers' pole to an area. The following factors may indicate a good choice of location for smokers' pole:

- Away from entrances, air intakes, consistent with existing policy
- Location based on observed patterns of high rate of smoking activities (hot spots)
- Visible but not too prominent or too obscured
- Away from main pedestrian walkways
- Located near public amenities (benches, trash bins, shelters etc.)
- In relatively well-maintained area (increase the chance of smoker's pole being regularly cleaned, reduce "broken window" effect)

A group of student conducting study on the issue of cigarette butt disposal did a campus-wide field study in 2015. The illustration below shows their mapping of smoking hot spots and butt receptacles across the campus.



Map: Tang, Rennie, Hsieh, Côté, SEEDS Sustainability Library, 2015

There are in fact additional smoker's poles that have been newly placed on campus at various locations from 2015 till now. Examples include the ones at Marine Drive residence (besides Point Grill & in common green spaces), the ones beside The Nest's main entrance, and the one outside English Language Institute. Ideally, these poles can direct smoking behaviours away from the crowd (building entrances etc.) and effectively collect butts on the spot of smoking. It can also be noted that relatively few smokers pole are in place inside the HSP compared to other areas on campus. Therefore, placing smokers' poles to reinforce current policy and tackle smoking hotspots can be an alternative to a large-scale smoke ban.

At spots such as outside of Irving Library and in Marine Drive residence, this reactive method has been generally successful in reducing ground waste and guiding smoking activities. In areas with *high pedestrian flows* such as The Nest and Sauder school of business, more careful evaluation has to be made - a high visibility of smoker's receptacles can lead to a higher usage, while can also potentially increase exposure to second-hand smoke and the social impact of smoking.



Photo: Cigarette receptacle outside of IBLC



Photo: Cigarette receptacle & signs beside benches outside English Language Institute



Photo: smoker pole newly placed outside of The Nest

The report by Tang, Rennie, Hsieh, Côté also commented on the design of smoker pole and ashtray. The uncovered “open access” ashtrays or poles can often be found overfilled with butt and water after adverse weathers. They also contains miscellaneous garbages that doesn't belong. Examples of this undesirable and outdated design can be found:



Photo: pole outside UBC Networks of Centres of Excellence



Photo: uncovered ashtray in Patient Park



Photo: undesirable situations associated with the design (left: after rain, right: garbage)

The ashtrays pictured above are the only large, stone based, uncovered cigarette receptacles found on campus. The fact that all three of them are located inside the patient park in the health sciences precinct makes the discussion around the design of smoker's poles particularly pertinent in this study. To establish the visual identity, enhance the usage, and minimize "broken window effects", cigarette receptacles in the precinct should be upgraded to more effective design. Improvement can be made based on existing models found on campus and elsewhere in Vancouver:



Photos: effective design of smokers pole found on campus and in Vancouver

Within the scope of the precinct, there are currently three receptacles all being placed at patient park, and none were found elsewhere. Based on the large size of the precinct and the undesirable status of current ashtrays, **it's evident that well-designed smokers' poles are needed to be more strategically placed within the precinct.** These smokers' poles can reduce cigarette wastes by offering people "advised method" of butt disposal and better access to exercise compliance. If properly designed and placed, they can also serve to reinforce current policies, establish small-scale "designated smoking zones", and better guide smoking activities.

B. Area of compliance

Incidences that show smoker's consideration of minimizing the impact of second-hand smoke can be noted. One such example can be found in the dentistry courtyard (before renovation starting Sep 2016), where two sets of benches are used in different frequency by smokers. Shown in the picture below, on the left side, there's a set of benches that are almost adjacent to each other, and are located next to central walkways in the courtyard. On the right side, there's one bench that's located on a rather isolated and secluded corner of the courtyard, shaded by vegetation in the summer.



Photo: dentistry courtyard sites (no longer there since March, 2017)

Cigarette butt count result shows that benches on the high profile location are much less used by smokers compared to the secluded one, with 8 butts found near the group of three benches, and 45 butts found near the isolated one. This phenomenon points to a promising outlook that with a well-chosen location, the social and health effect of smoking can be effectively minimized. The observation also reveals that smoking without affecting others has been more or less established as a social norm around the area. Planning that revolves around the issue of smoking should seek to provide locale for smokers to carry out their consideration for others, and to reinforce the sensible cautiousness of smokers.

VII. Local Policy Environment

A. Background Policy Review

UBC is on an institutional land with special spatial status. It is not part of the City of Vancouver, but a member of Metro Vancouver Electoral Area A. UBC thereby is not under Vancouver's municipal governance, but has a high degree of jurisdiction over its own operation and land use. UBC implements its own policies and procedures passed by Board of Governors, and have the ability to regulate particular issues within the institutional boundary. UBC is also a large entity of employment and a host of diverse land use and occupancies. Due to these factors, UBC operates under its own policy which specifically regulates smoking issues on campus. Other regulations and guidelines that interact with and impact campus policy are also briefly introduced in this section.

UBC Policy 15 is the dedicated policy that regulates "Smoking and Smoking Product Promotion on Campus". It can be traced back to 1991, and is most recently revised in 2007. The responsible representative of the policy is VP Administration & Finance, which means proposed revision of the policy will be subject to the VP's final approval. The primary objective of the policy is identified as to "diminish the exposure to smoke and promote health and safety" (UBC, 2007). UBC intends to achieve the goals by controlling tobacco and smoking product promotion, sale and use on campus. For the purpose of this study, only policy relevant to tobacco usage is reviewed in detail in the following.

The City of Vancouver adopted a `6-meter-rule` to outdoor smoking as specified below:

- (a) in a building,
- (b) in a vehicle for hire;
- (c) on public transit including a school bus, passenger bus, ferry, or rapid transit;
- (d) in an enclosed or partially enclosed shelter where people wait to board a vehicle for hire or public transit;
- (e) within six metres measured on the ground from a point directly below any point of any opening into any building including any door or window that opens or any air intake;
- (f) in a customer service area;
- (g) in a plaza identified in heavy black outline in Schedule "B"; and
- (h) within six metres of the perimeter of a customer service area (Vancouver Health Bylaw).

Signage reiterating the policy statement should be displayed

(a) at each *entrance* to a building or customer service area where section 2.2 prohibits smoking, stating: **THIS IS A SMOKE FREE ENVIRONMENT – NO SMOKING**; and

(b) on *each exterior wall* of a building, where section 2.2 prohibits smoking, stating:
SMOKING IS PROHIBITED WITHIN SIX METRES OF OPENINGS INTO THIS BUILDING INCLUDING DOORS AND WINDOWS THAT OPEN AND ANY AIR INTAKE.

WorkSafeBC is a regulatory agency that administers the Workers Compensation Act, which is an act of the B.C. Legislature. The agency`s policy revolves around minimize exposure at worksite, which include:

- Prohibiting smoking at the worksite
- Restricting smoking to a designated smoking area such as a safe outdoor location, or a designated smoking room (DSR) that is structurally separate from other areas

The WorkSafeBC regulation deal primarily with indoor smoking, and do not have explicit mentions about outdoor smoking regulations. It also laid out some guidelines of establishing designated area of smoking to minimize worker`s exposure:

- A separately ventilated, structurally separated room which workers may choose to enter for a period of time not to exceed 20% of their work period. Entry must be intermittent.

- Patios or outdoor areas that have free movement of air. This usually means an area with a floor, a roof, and obstructions on no more than two sides. Adjacent buildings and objects must be taken into consideration.

UBC policy states its smoke-free extent as the following:

1. in any UBC controlled and occupied building, structure, hazardous materials storage location, or other UBC controlled and occupied place that is fully or substantially enclosed, or within a distance prescribed in the procedures from any prescribed place;
2. in any bus shelter located on lands controlled and occupied by UBC or within a distance prescribed in the procedures from such a bus shelter;
3. in any UBC Vehicle; and
4. in any designated No Smoking Area (UBC, 2007)

For the context of this project which focuses on the issue of outdoor smoking, a separate section in the policy that specifies outdoor smoking prohibitions can be examined in more detail. As according to UBC policy 15 section 4, Smoking is permitted within *Designated Smoking Areas* (applied to UBCO) but is otherwise prohibited out-of-doors within:

4.1.1 the UBC Okanagan campus; and in all other cases (details in report section 5A1)

4.1.2 the following prescribed distances in respect of any UBC occupied building, structure, or other UBC occupied place that is fully or substantially enclosed:

- a) 8 metres from any doorway (including loading bay doors);
- b) 8 metres (notably including vertical) or 2 stories measured vertically, whichever is greater, from any window unless clearly being neither designed for nor capable of use for ventilation;
- c) 8 metres (notably including vertical) from any air intake
- d) the posted limit, but if unposted then 8 meters, from any place that a reasonable person would believe contains hazardous materials or poses an explosive flammability risk; and
- e) 8 metres in respect of any bus shelter located on lands controlled and occupied by

UBC

One thing should be clarified that the “8-meter rule” does not delineate no-smoking areas as 8 meters *from any buildings*, but rather 8 meters from any entrances, air intakes, and windows of buildings. This can be a common misunderstanding of the policy. Smoking activities that gather around buildings are sometimes seen as a violation of the policy; however, if they are 8 meters away from any possible building ventilations, such activities are comply with the policy. Examples of this can be found in the following illustrations:



Photo: smoking pole right outside of building and near “window” looking structure, however it is sufficiently far away from any ventilation channels (e.g. entrances...)



Photo: butt pile near Koerner pavilion, right next to building but away from entrance

It can be seen that “8-meter rule” is the key regulation that is governing outdoor smoking in UBC vancouver campus. This standard is more stringent than provincial and municipal legislations, and is intended to conform to and support legislations (UBC, 2007). Vancouver’s Health bylaw restricts smoking within six metres of building windows, doors and air intakes, and establishes smoke-free areas in parks and beaches (201). BC Ministry of Health establishes a provincial standard of 3 meters (n.d.). It’s usually the case that with a downscaling of policy scope, more stringent standards are adopted to abide by and reinforce higher level policies. In UBC’s case, the change from “6 meters away from ventilations” to “8 meters” was relatively recent in 2012 (UBCinsiders, 2012). The change also reflects the institution's wish to observe and reinforce municipal bylaw standards.

B. UBC Policy - Establishment of Designated Areas

In the policy guiding section, establishment of designated areas that either permit or prohibit smoking are outlined as rather favourable approaches to direct the issue of smoking. Specifically:

- designate permitted Smoking areas to encourage people who smoke to do so in locations that reduce the exposure to passers-by; and
- Establish non-smoking areas in other places where second-hand and side stream smoke is unavoidable or difficult to avoid without imposition upon non-smokers (UBC, 2007).

The primary objective is identified as to minimize exposure to second-hand smoke, same with the overarching objectives. **The procedures to establish designated smoking areas are outlined as the following:**

Designated Smoking Areas that do not involve construction of a shelter can *only* be created by Campus and Community Planning after consultation with:

In respect of UBC Okanagan:

- a) Associate Vice-President, Operations; and
- b) Local Safety Committees;

In respect of UBC Vancouver:

- a) Local Safety Committees; and
- b) Plant Operations.

If involving construction of a shelter, “Health Safety and Environment” should also be consulted in addition to the above stakeholders (UBC, 2007).

There are also some guidelines of creating designated smoking areas:

- Designated Smoking Areas shall be indicated by posted signage or markings that, where feasible or necessary, aid identification or enforcement of the bounds or limits of Designated Smoking Areas.
- Where feasible Designated Smoking Areas will provide shelter from the elements and located or constructed to reduce the fire hazard to surrounding areas.
- Designated Smoking Areas may not be fully or substantially enclosed (UBC, 2007)

The procedures to establish no-smoking areas are outlined as the following:

No Smoking Areas may be designated by the Responsible Executive (author's note: currently VP finance), or delegate, and identified by published notice, signage, or markings deemed by the Responsible Executive as reasonably necessary to identify the area as one in which Smoking is prohibited (UBC 2007).

It can be seen that designating both smoking and no-smoking areas are possible under university policy. The procedures emphasize on stakeholder consultation, good design and suitable placement of designated areas. The policy provides a framework of designation process that can be considered in conjunction with information provided earlier in this report to move the notion of designating smoking/no-smoking areas forward.

On a side note, contrast to the clearly outlined procedure, **no existing "designated smoking areas" or "designated no-smoking area" are specified in the policy.** There are a limited number of outdoor areas on campus that can be considered as "designated no-smoking areas" which include Botanical Garden and Nitobe garden. As stated on Botanical Garden's website, "the Garden is a tobacco-free environment. Smoking and tobacco products are not allowed on Garden property, including all buildings, grounds, restrooms and parking lots". Signage has also been found indicating the smoke-free status of the area:



Photo: signage denoting smoke-free area

As indicated by the signage, the entire garden is a smoke-free zone while there is designated smoking area located by the entrance of the garden. Such cases of designation are not mentioned in the official policy, thus the details and procedures of the designation process are

not conveniently laid out. It should also be noted that attractions in UBC might be operating under different local policies since they are not of the same level of accessibility as general academic areas (due to ticket fee etc.), and might be of special considerations (plant bed protection etc.). Lessons can still be learnt from the case that:

- designating a small-medium sized area as smoke-free is more practical to implement
- Rationales that call for special considerations
- signage should be used to establish the policy and identify its scope
- a larger designated smoke-free area and a smaller designated smoking area may work well in combination - as they effectively “move the issue to periphery”

UBC policy stated that it intend to promote health and safety while allowing for exercise of personal choice subject to the primacy of protection of others from risk of harm or discomfort. It can be inferred that a sound association with the goal of minimizing exposure must be established as the premise to advance smoking policy and establish new smoke-free zones. Current policy controls tobacco usage mainly to address the issue with second-hand smoke exposure. **The issue of waste management and other sustainability commitment have not been explicitly linked with smoking on campus, which presents both opportunity and challenge for new smoke-free zones to be established based on these values.** **Hospital and health sciences area have intrinsic link with health promotion which can be used to gain traction on pilot smoke-free projects, campaigns, and local designations.** However, the formal establishment of large scale, permanent smoke-free area should arguably be based more on any observed issue with exposure to second-hand smoke. If there are no such concerns, the issue might already be moved to periphery and is under good compliance status. **Efforts may gain better return if focused on raising policy awareness, unifying existing policies, dealing with cigarette butt issues, and revamping outdated infrastructures etc.**

*other side notes:

1. According to UBCinsiders, the policy change from 6 meters to 8 meters was in 2012. However, the “last revision” date shown on policy 15 is “2007”. The effective no-smoking zones on campus including Botanical Garden, Nitobe garden are not listed as designated no-smoking areas in the policy. The discrepancies may indicate that not all

relevant changes are necessarily reflected in the official policy, or that the policy does not necessarily incorporate local variations

2. Campus-wide examination: the change of policy extent from 6 to 8 meters happened 4 years ago, signage and decals in campus areas have not been all keeping up with this change. Health Sciences Precinct are among the few areas where signage posting the new standard have been widely and uniformly adopted. Various outdated signs have been found on other places on campus, and various signs indicating limits other than 6 or 8 meters have also been found. It's stated in policy 15 that the "posted limits" are the one that count, therefore, there can be ambiguity associated with these signage. **The issue in these places should be addressed by Local Health and Safety Committees, and a decision should be made of whether to standardize signage to current policy or to adopt special local limit. Here it also present Health Sciences Precinct another option to adopt a stricter "meter rule" to advance its local smoking policy.** Such initiative can be simpler to carry out than establishing smoke-free zones, and may be more straightforward and easily deliverable to the public.



Collage: pictures taken of campus signage denoting varying local regulations

C. The Interplay of Policies in the HSP

As discussed above, there are various “local policies” that can be implemented at one place. This is particularly the case in the health sciences precinct. Despite a generally well-adopted 8-meters policy, there are other factors that complicate existing local policy implementations. The factors include the presence of UBC hospital, and three hospital affiliated pavilions which are under the administration of Vancouver Coastal Health (VCH); as well as the existence of Djavad Mowafaghian Centre for Brain Health which is said to be jointly operated by UBC and VCH. In combination with other academic and commercial occupants in the “precinct”, differences exist in terms of interpretations and applicability of university policy. **The differences in local policy implementations and the possible conflicts of various policies can result in misunderstandings, ambiguity and poor compliance.** The most representative case of “policies in interaction” is associated with the unique presence of VCH in the precinct and their particular smoking policy.

VCH has a well-defined smoking policy which serves to fulfill two key goals:

1. To protect patients, clients, staff, volunteers and the general public from the harmful effects of smoking and exposure to second-hand smoke
2. Vancouver Coastal Health (VCH) has a role as a health care provider and is obligated to exemplify good health practices. VCH provides leadership in health-oriented policy and practice that supports the achievement of high health standards.

To achieve these goals, VCH adopted a smoke-ban on its properties starting 2008; the policy specifies that Tobacco use is prohibited in or on all VCH owned and/or operated premises, facilities, and grounds with the following exceptions:

- Culturally related ceremonial use of tobacco will be permitted.
- Special consideration in timing for implementation will be given to identify groups that may include mental health/addiction services, residential facilities, and palliative care (VCH, 2008).

The policy also encourages VCH funded/contracted facilities to adopt similar practices; and encourage the advertisement of VCH as a smoke free environment (VCH, 2008). The policy can be more straightforwardly summed up through their signage and brochure image:



left: VCH smoke-free policy brochure image
Source: <http://www.vch.ca/media/SmokeFreeBrochure.pdf>



right: VCH general no-smoking signage

The implementation of VCH's policy in UBC is not without its problems. As noted by UBC policy 15, the policy does not apply to places where UBC is only the landlord (2007). This combined with the common adoption of indoor smoke-ban in Canada, means that the indoor smoke-free regulation of UBC and VCH are of the same nature. However, when it comes to outdoor spaces, as UBC in fact owns the land surrounding the hospital, VCH's policy technically should not apply to these spaces. This means that the phrasing of "our buildings and grounds are smoke-free" on the signage only partially apply to the situation in the HSP - as the "grounds" part does not come into effect in the spatial scope in UBC. In the open space areas outside of hospital buildings, it's UBC's policy that regulates the smoking activities. As UBC does not have particular outdoor smoke-bans other than the 8-meters rule, there are in effect no restrictions to smoking in outdoor public spaces in the precinct.

This particular issue with implementation of the policy has not been well-acknowledged. Little knowledge has been established on policy applicability previous to this study. Conflicting interpretations of the extent of policies can be noted, and acts of policy implementation under

differing intentions can be observed in the precinct. One distinct example is found in the patient park in the HSP besides UBC Hospital. This public outdoor resting place is considered as a smoke-free area by VCH as guided by their outdoor no-smoking policy. However, as spaces beyond the exterior walls of the buildings actually belongs to UBC, conflicting approaches have been noted around smoking issue in this area. Upon going into the patient park, a VCH sign can be seen denoting the assumed smoke-free status of the area. When entered into the park, two stone-body ashtrays that are of obvious visual presence are in fact located inside, plus one smaller cigarette receptacles. The ashtrays, along with other facilities in the area are put in place by UBC, as the university maintains the landscape in the area. It was unable to trace back to the detailed origin of the ashtrays, but presumably it's a reactive measure to smoking activities observed in the area.



Photo: Patient Park - is smoking allowed?

It's most probably that the area was discovered to be a smoking "hotspot", as concentrated cigarette butts have been found in the place. The ashtrays were then put in place to collect wastes and to keep the ground clean. This differing operation represents a certain ambiguity and misunderstanding associated with the policy applicability. It also shows that the issue may not have been discussed, shared, and addressed by joint stakeholder conversations - a lack of coordination and collaboration. There are ways to move forward to clarify the issue:

1. Engage stakeholders, bring up concerns of both sides and coordinate around a uniformed standard
2. If decided to keep the receptacles in the area - it's recommended to adopt better designs and re-examine the placement as noted in section 6
3. If decided not to keep the receptacles and make the area smoke-free, potential address should be made to accommodate smokers with addictions, mental health related issues, and disabilities. Amendment should be made to UBC policy to reflect the change. New signage can be designed to inform change.

There are other cases of VCH policy implementations in UBC that might be under false premises - as the signs denoting "our buildings and grounds are smoke-free" can be seen in various places around VCH affiliated units. The credibility of these is lowered based on the premises established above. If VCH policy indeed applies to the area around VCH affiliated buildings, the notion to make health sciences precinct a smoke-free zone would be already half accomplished - as VCH policy would virtually delineate a "smoke-free zone" of considerable size inside the precinct. However, due to the general inapplicability of VCH policy on UBC's land, this should not be considered as the case for now. Furthermore, in a conversation with the project team, the idea of using VCH outdoor "smoke-free" policy to urge a stricter enforcement on the issue has been brought up. Directly adopting VCH policy to form "smoke-free" zone around the hospital was also discussed as a possibility to move the initiative forward. But owing to the fact that VCH policy should not be effective on UBC's land, it's decided that promoting such policy can be a form of "false advertising" and is not appropriate in this context.

In contrast with this examination, it has been observed that more signs and sandwich boards denoting VCH policy have actually been placed into hospital surrounding areas during the course of this project (June - Dec 2016). Several cases of sandwich boards being newly placed near the entrance of VCH affiliated units can be noted in the picture below:



The increase of signage indicates a resolution of stricter enforcement on smoking on the VCH side. The fact that the signs are all placed near building entrances (instead of in parks, courtyard or other open spaces) suggests that the focus of reinforcement aligns well with existing UBC policy. As 8 meters near building entrances are effectively smoke-free area under UBC policy, putting more prominent signs (e.g. sandwich boards) around the area works well in reemphasize the smoke-free status of area. The only issue with the action is the technicality of policy applicability - as the outdoor spaces are not properties of VCH, the phrasing of “our buildings and grounds are smoke-free” does not, and should not practically apply to these areas.

The “disagreement” of policy implementations can be more graphically presented with the picture below where a situation similar to the case of Patient Park emerges:



Picture: presence of smoke-free sign and smoker's pole in front of Detwiller Pavilion, picture taken 15th, Dec 2016.

Seen in the picture, a VCH sandwich board and a smoker's pole have been put into place near the entrance of Detwiller Pavilion. The conflicted intention of the sandwich board reinforcing an enlarged smoke-free zone and the smoker's pole marking the distance away from building where smoking is allowed can be clearly recognized. This again points to the lack of background coordination between policy enforcers, and a long-standing ambiguity that revolves around the applicability of UBC and VCH policy. It can be also inferred from these cases that UBC and VCH are working on the same direction to reach the goals to reinforce existing smoke-free policy and to better execute the policy using infrastructures.

The overarching goals on both sides to diminished exposure to second-hand smoke and promote healthy practices also align well with each other. With some establishment of mutual understanding around policy applicability and implementation strategies, it can be foreseen that the two parties will be able to cooperate on the issue, clarify on the execution of policies, and complement each other on ongoing initiatives. This can be achieved through the form of

stakeholder discussion, meetings between representatives, collaborative local health committee (LHC) meeting, or informal conversations. Key issues to be tackled are:

1. Clarify on the extent of VCH policy transferability (+ e.g. does hospital parking lot located along Wesbrook mall classify as “VCH’s ground”? etc.)
2. Establish mutual understanding on actual current policy environment
3. Decide on measures to correct errors associated with current policy implementation (replace or redesign of the sandwich board etc.)
4. Share insights on current policy compliance status
5. Gain ideas on future direction of policy - address the question of “whether a more stringent policy is needed”
6. Discuss on the need, strategy or previous experience dealing with smoking among vulnerable population (patients, disabled population, population with addiction etc.)
7. Share experience on signage placement
8. Share experience on other infrastructure

Discussion: Deployment of Signage

Similar to other universities, UBC's policy depend on compliance encouragement over formal enforcement. As noted in 6.2.2 in policy 15, students, faculty and staff can take effort to ensure compliance by "encouraging smokers to move to areas where smoking is permitted and, if in the vicinity, to use a Designated Smoking Area" (UBC, 2008). The absence of formal enforcement and penalty is explained by the possible complicated circumstances associated with smoking, a lack of understanding to local policy, and similar approach adopted by the municipalities.

For example, Vancouver has two bylaws restricting where people are allowed to smoke. One prohibits smoking inside public buildings and most businesses, and within six metres of windows, doors and air intakes, and carries a maximum fine of \$10,000 (Health Bylaw). The other is a park board regulation introduced in 2012 that bans smoking in parks and on beaches and can result in up to \$2,000 in fines. With regard to general outdoor smoking, there are no stringent enforcement or fines associated with bylaw violations. The City of Vancouver's chief licence inspector stated that the city's health bylaw is intended to serve public interest and not to impose a duty on the city to enforce its provisions. The preferred approach is said to be a progressive compliance strategy which begins with education (policy notice). In addition, crowd monitoring and empowerment can also serve the interest.

Other tactics such as more prominent signage can aid to reemphasize the policy. Signage should be based on the establishment of a uniform policy, as conflicted messages conveyed by signage can cause adverse effects. There have been incidences in the precinct where people were seen smoking immediately next to the signage shown in the picture below. This indicates land users' possible confusion associated with the disagreeing infrastructures, and potentially their own disagreement with the implementation of the policy.

Nonetheless, signs and messages of notification can be considered as effective tactics in reinforcing smoke-free policy. The psychological side of the issue will be explored in more detail in a report produced by Marcus Jung. This report only presents some suitable design as alternative to sandwich board as shown in the picture below. Another possible alternative is to make use of the digital signage platforms to inform resident inside buildings.



Photos: possible signage formats



Picture: UBC digital signage, source: <http://digitalsignage.ubc.ca/>

VIII. Planning Considerations & Public Opinions

As part of this project, a few informal interviews were conducted with Campus & Community Planning (C+CP) planners to gain understanding of the approach and mindset on the planning side of the issue. Main points derived from the conversation are summarized in below to provide additional context and consideration revolve around the issue.

1. General design principles of outdoor space facilities can be found in *C+CP Land Use Plan* and *Campus Design Guideline*. **Aesthetic and budgetary concerns are a major part of campus design, and sometimes trade-offs are involved.** For example, the suggestions from previous SEEDS projects examining the placement of cigarette butt receptacles and placement of recycle stations are not immediately adopted since more examination is required to align the suggestions with campus design visual appeal and budgetary standards.
2. Outdoor signages generally need to be approved by or run through C+CP.
3. The pursuit of a “smoke-free” campus has been raised before by advocacy groups and individuals. Advancing the concept to implementation has never gained traction for a variety of reasons, including compliance and enforcement issues in addition to potential legal implications under human rights legislation that would require the university to accommodate smokers who claim they have an addiction. **Humanitarian concerns and considerations for vulnerable populations should be incorporated when implementing a more rigid policy.**
4. Typically a VP’s considerations of proposals (representative executive of UBC no-smoking policy) are done through collaboration and discussion with other members of the executive team, with input from staff. A similar process for would be anticipated for this issue, once a proposal and implementation strategy has been developed. *Author’s note:* in order to formally integrate changes to UBC policy 15 or to formally establish new smoke-free zones / smoking zones
5. **“Given the inherent connection to health and wellbeing within this precinct, declaring smoke-free areas aligns well.** The concept of health-precinct ‘smoke-free’ areas may be something worth exploring however as a pilot. **Given UBC**

campus is the same size as a small city, an approach that focuses on the pursuit of smoke-free distances / spots (as opposed to a smoke-free area / smoke-free campus) is also consistent with municipal best practices. *Author's note:* small scale, pilot program with building-specific areas can be more effectively carried out. Initiatives that focus on reinforce and reemphasize current policy, and tackle non-compliance “hotspots” are more favourable. Further expansion of policy scope (e.g. phasing in the smoke-free policy in open park spaces) would require the establishment of the necessity to do so

6. In previous discussions related to this issue, the university has been reluctant to create specific smoking kiosks. At this time, there is little support to pursue this as an alternate option. The main reason behind the opposition of placing gazebo or smoking shelter structures on campus is that it does not conform with current campus plan design standards. Gazebos in UBCO are also in the state of being gradually phased out and potentially being replaced by new structures in the future.

Add on to points above, the alternative “advancement” strategy that is most favoured by C+CP is to phase in the open park spaces no-smoking plan. The plan is to build on pilot projects and consultations, and eventually declare the open park spaces within the precinct to be smoke-free. This would enable smokers to continue to smoke on sidewalks, or other non-park areas that remain at least 8 meters away from building intake areas (as per Policy #15). The plan essentially establishes park areas as cores and works to “move the issue to the perimeter”. This solution can be presented as a more realistic and reasonable alternative to the precinct-wide smoke-free declaration. The plan also aligns with the future plan for open spaces inside the Health Sciences Precinct which involves facilitating more social activities, more pedestrian flow, and a revitalized public space. On the other hand, possible oppositions can be directed towards the implication of “perimeters” in this plan -- is it suitable for sidewalks, laneways, and other non-park spaces to be categorized as “perimeter zone”, and for them to possibly endure a more concentrated smoking activities? Would directing smoking activities to walkways in fact increase pedestrian exposures to second-hand smoke or causing smokers to be more proximate to

buildings? More broadly, how can “perimeter zones” that are less “sensitive” to the harm of smoking be effectively identified on campus?

A Critical Stance on Survey Results

As part of this project, an online-survey distributed electronically to university staff and in person to students was used to collect preliminary public opinions on the issue. The proposal of establishing smoke-free zone in HSP has gained general approval, with around 80% of the respondent inclined to support the notion. The survey is administered in collaboration with Marcus Zhang who produced a detailed report on the survey results. This report only directs the attention to a few points worthy of critical concerns that might influence future policy proposal.

When being asked: “Where do you usually see people smoking in the HSP?”. The most voted option is “sidewalks, walkways and laneways” which constitute 37% of overall votes.



This again pose the question of whether these areas can be identified as “perimeter zone” where smoking activities can be further directed to. As sidewalks are locales of high pedestrian flows, such decision might risks the possibility to increase second-hand smokes exposures for pedestrians. Cigarette butts will also be discarded in these areas of high visibilities instead of secluded corners or designated smoking areas. If no suitable perimeters can be identified, establishing low-profile designated smoking zones inside a relatively large smoke-free area can be a more favourable option to move forward. Further studies and consultations have to be conducted to address the issue.

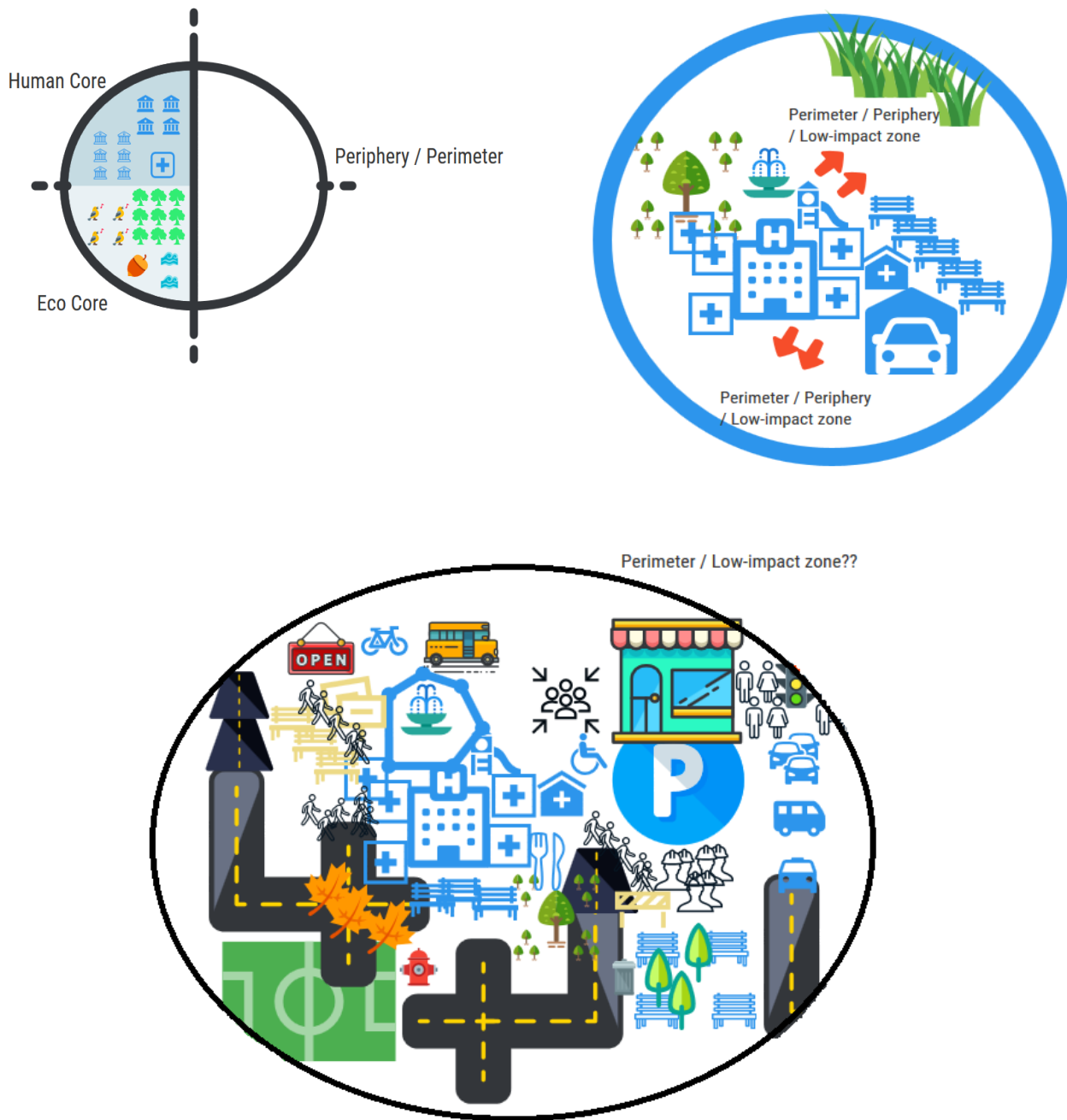


Figure: the dilemma of low-impact zone identification

The second critical aspect is with regard to the nature of survey demographics. As Greater Vancouver Area has only 14.7 percent of smoking population (among the lowest in the country) (Canadian Partnership Against Cancer, 2013), surveys typically have unproportioned responses from non-smokers over smokers. In the case of the survey in this study, an overwhelming 95% of the 170 responses indicated that they are non-smokers. This data indicates

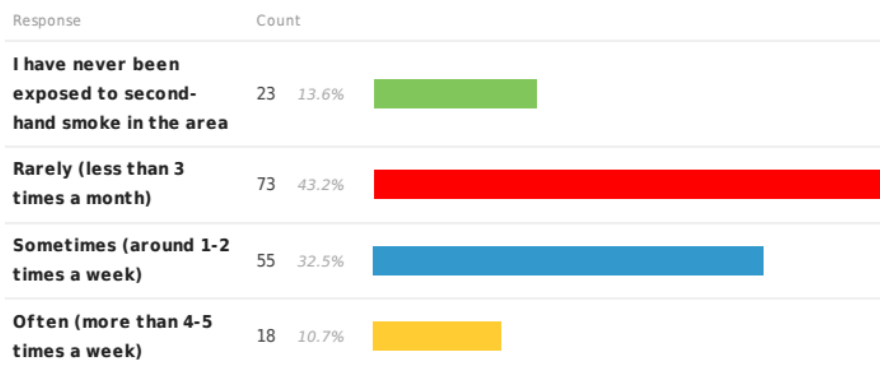
the demographic composition with low smoking rates, and smoke-ban as a favourable initiative to benefit the majority of population. While it can also be not enough representative of smoker’s experience and opinions of the issue. Also, the survey is not distributed to hospital patients or health care practitioners. Focus groups or targeted survey can be implemented in the future to gather more in-depth views on the issue, and to collect particular concerns and insights from target populations.

Lastly, public opinions hints to the ambiguity with regard to the goal of smoking policy advancement. As can be seen in the results below, when responding to the question of the key reason to initiate a smoke-ban, the primary reason which receives more than 90% of the vote is to “reduce exposure to second-hand smoke”. The goal aligns well with popular knowledge of the harm of smoking and the general purpose behind smoking regulations. If examining with a more critical perspective, the response to this question can be compared to the question of “How often have you been exposed to second-hand smoke in the precinct?”. In this case, more than 50% of the responses indicate that they have rarely or never experience the issue of second hand smoking in the area.

If you are inclined to support making the precinct into a "smoke free zone", which of the following do you consider the most important reasons?



How often have you been exposed to second-hand smoke when you are in the Health Sciences Precinct?



Total: 169

These responses might question the decision to adopt a more rigid policy as reducing harms of second-hand smoking is commonly identified as the primary goal of smoking policies. If second-hand smoking has not been perceived as a pressing concern, and re-occurring

violations current policy has not been noted, there might not be a necessity in adopting a large-scale ban.

The results raises the importance of clarity the effectiveness of current policy - “Is current policy already effective in most cases to regulate smoking activities and reduce second-hand smoke exposures?”; “Would strategies targeted to deal with smoking hotspots of non-compliance be more effective and easier to carry out than a large-area smoke-ban?”; “Could reinforcing current policy or target messaging be considered as favourable alternative options?”; “Are there other goals of public concerns that can be identified to justify for the decision to move forward?” etc.

IX. Recommendations & Summary

This report, through examining case studies and local policies, establishes smoking regulation as an issue of great complexity. There are both opportunities and challenges in designating a large-scale smoke-free zone around the hospital area. The main favourable conditions supporting the designation are: 1) The existing connection between health sciences area and health-centered values and practices; 2) Notable previous cases of establishing smoke-free zone around hospital as a policy initiative; 3) Anticipated support from the majority of the public. The main factors that present challenges are: 1) The lack of evidence on the need to advance current policy - without a rationale that connects the smoke-ban to public interest, it would be hard for the policy to achieve high compliance rate; 2) The complication and conflicts of existing policies in place, and the uncertainties associated with stakeholders and policy coordination resolving the issue; 3) Concerns revolve around inclusion and feasibility – the dimensions of social and economic sustainability

Various alternative solutions are available for consideration. One is to focus on using infrastructure such as smoker’s pole or smoking pavilion to guide smoking activities, reinforce current meter-rules, and to establish small scale smoking zones. Outdated infrastructures such as the smoking ash urns in Patient Park should be replaced with better designs. The other priority is to coordinate conversations with VCH to resolve the conflicting policy messages found around the health sciences precinct. Also it can be noted that VCH’s intention of declaring smoke-free areas around the hospital works in favour of advancing local smoking regulation. It will be beneficial to work with VCH representatives to locate areas that are of primary concerns in

reducing smoking. Low-impact zones that are less harmed by smoking can also be identified. The strategy of “move the issue to the perimeter” can be used with the placement of both designated smoke-free zones and smoking zones in the area. The pros and cons can be evaluated for alternate scenarios such as declaring open park spaces in the precinct as smoke-free. For example, maps with such delineation outlined can help decision makers to see where would smoking activities be driven to under new policy, and if the scenario is desirable.

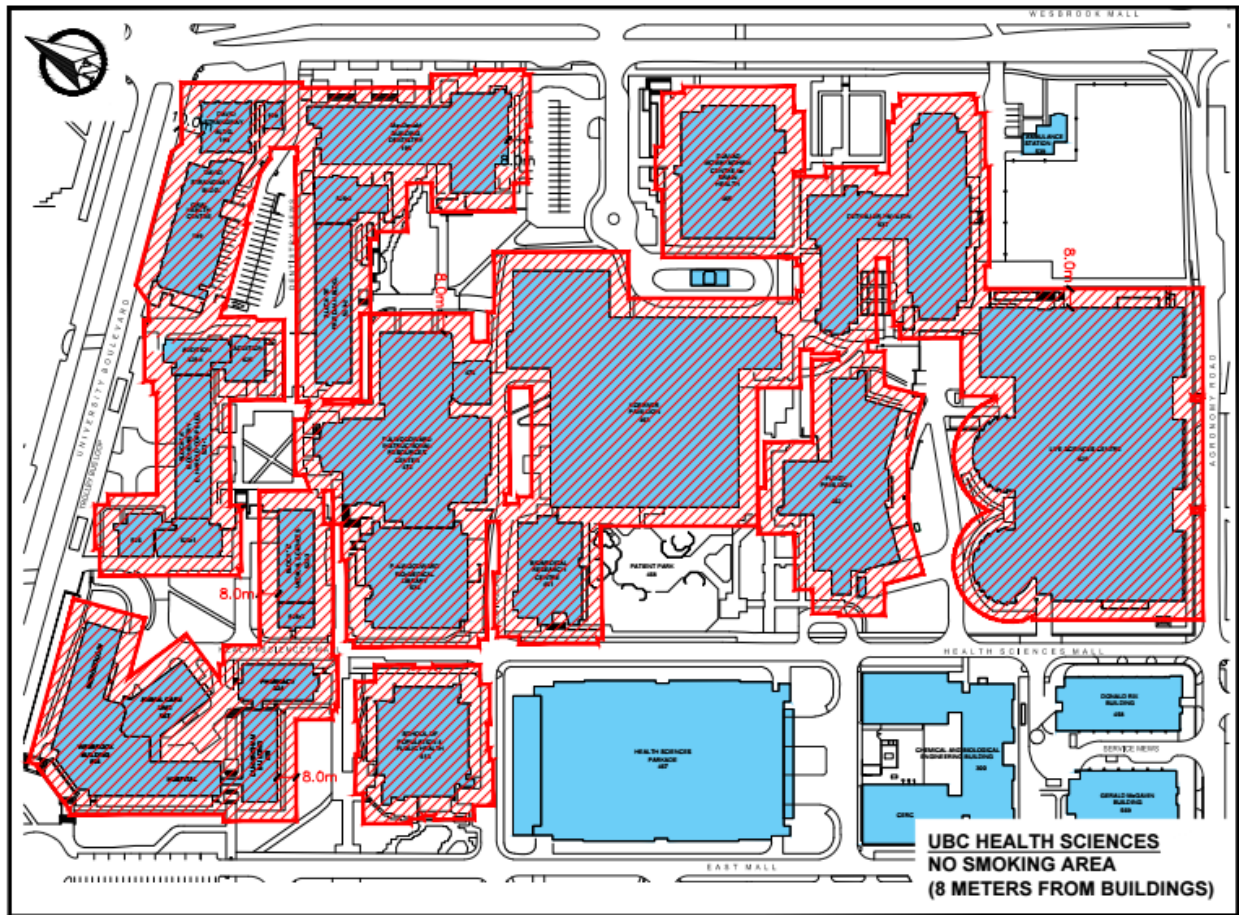


Figure: general extent of current 8-meter rule; note that does *not* reflect the exact extent of “8 meters from air intakes”, but shows a general impression of “8-meters from buildings”

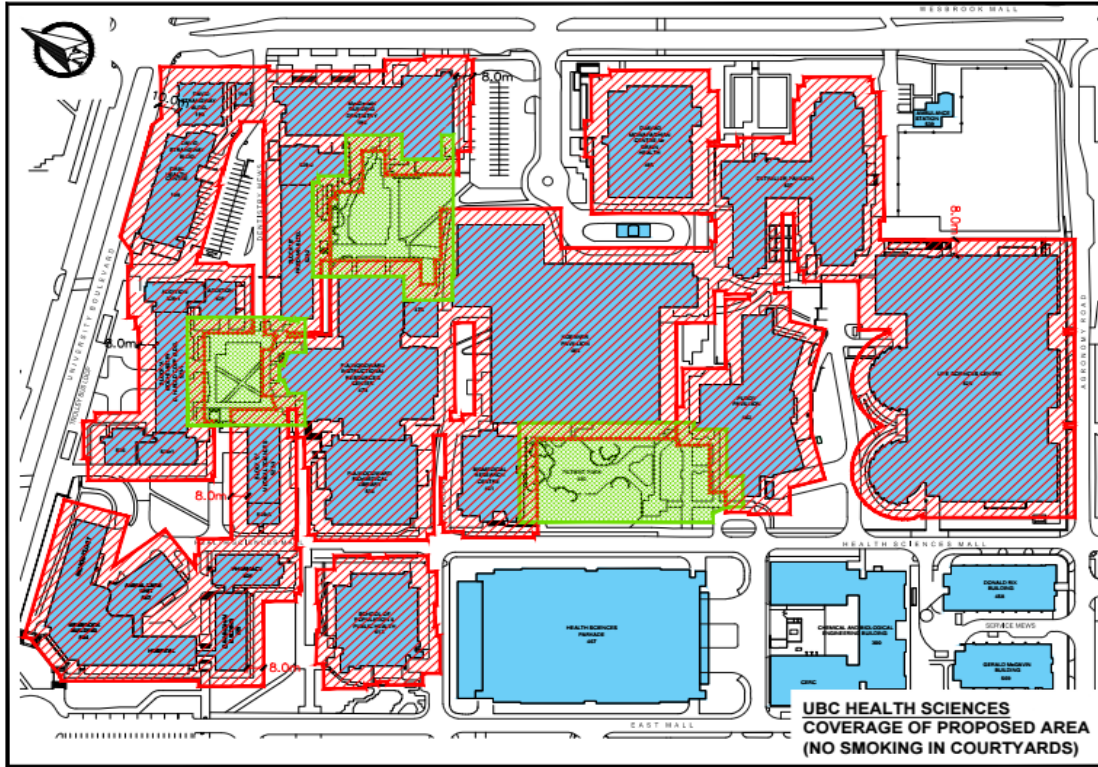


Figure: rough extent of 8-meter rule + smoke-free parks / courtyards

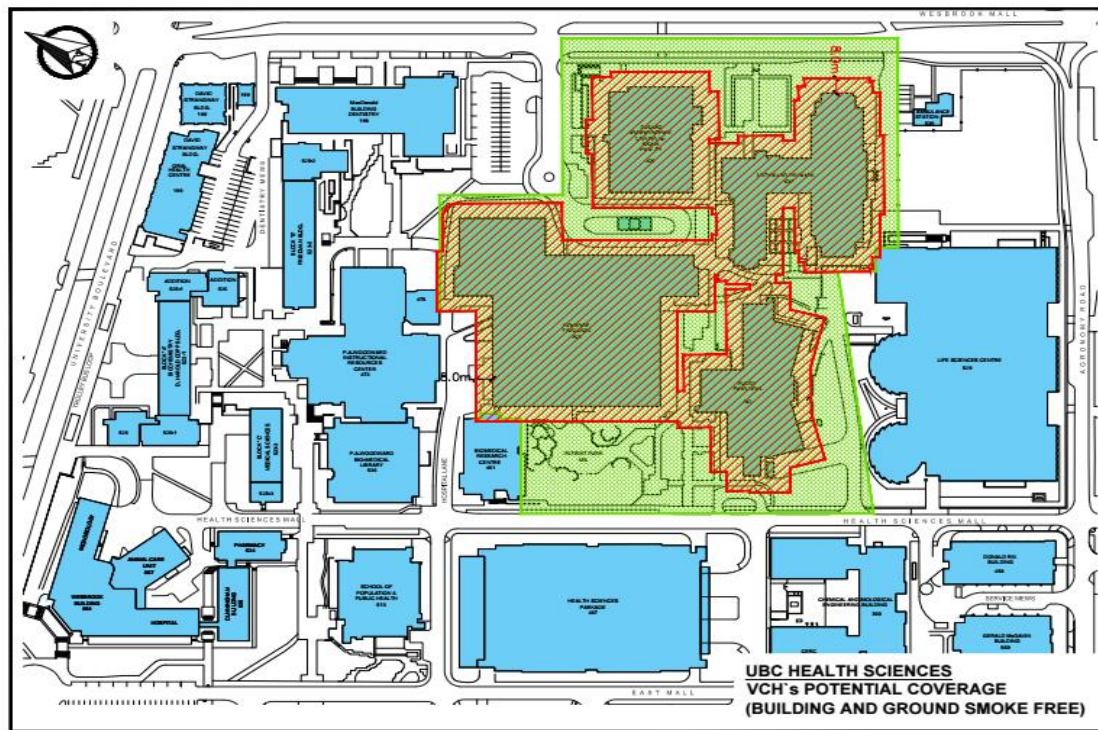


Figure: extent of VCH presumed smoke-free zone

Opportunities also present on the education, resource, and policy campaign side. Special signage tackling smoking hotspots can be put in place, and digital signage can be showcased to inform building residents. Smoking cessation programs and resources can be delivered to residents in health facilities and university staffs. On the information and data collection side, more specific studies can be done to develop a scheme to evaluate the effectiveness of current no-smoking policy. Conversation can be held amongst university operation units to figure out the logistics of placing new cigarette receptacles, the schedule for ground cleaning, and the usage of an existing smoking shelter structure on campus (near Gerald Mcgavin building, near University Services Building). These data can generate flexibility and more options to advance smoking regulation in the future.



Photo: ash urn placed near bench and within shelter structure - an informal smoking zone

From a broad perspective, designating smoke-free zones in HSP, and in UBC in general relies on a solid rationale and the establishment of necessity for it to be effective. Being able to identify clear purposes associated with the designation which also connect with public interests would be advantageous for policy implementation. Rationale can be established based on the special characteristic of the locale, or factors that appeal for special considerations (e.g. protecting plant beds in gardens, enclosed courtyard that are effectively smoke-free, high density social gathering spaces etc.) Signs denoting such rationale can be anticipated to gain more understanding from smokers and ensure better compliance rate.

From a local perspective, small-scale, context specific designations that can be phased in gradually are favoured over a sudden, large-scale designation. Short-term plans should focus on

resolving issues with current policy implementation, and tackle hotspots of non-compliance. Long-term plan can be initiated based on the result of policy scoping, goal identification, and the future progress of gazebo revamp in UBCO. Further exploration on policy reinforcement tactics, smoking cessation programs, and infrastructure designs can be ongoing initiatives along the process.

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