



North Campus Guide for Managing Outdoor Noise from Events

Introduction

North Campus is an academic area on the periphery of campus with institutional buildings, student residences, and arts and cultural facilities. It is an area that hosts outdoor events. The venues in the area include: Museum of Anthropology (MOA), Koerner's Pub and Cecil Green Park House, which are identified by the red boxes in the map below. Being on academic land, these venues are not subject to the neighbourhood noise bylaw.



The above map highlights the specific venues relevant to this guide.

This guide provides support for venue operators in the area on how to minimize outdoor noise impacts on adjacent neighbours from events at their venues based on best practices applied to the unique context of this area of campus. It includes planning principles and practices for managing event-related outdoor noise that are appropriate for this area of campus. Noise management strategies and considerations for other areas of the campus may be recommended at a future date.

The purpose of this guide is to improve communication between venue operators and community members related to outdoor events, clarify commitments to neighbourliness, provide guidance on the use of sound equipment, and identify ways to minimize disruption to the campus community during events.

This guide was developed by Campus +Community Planning (C+CP) in partnership with key representatives from the venues, along with input from Green College, Coast Strata and the University Neighbourhoods Association (UNA).

Context

Venues: Event venues in the north end of campus are all situated on academic land. These venues hold a variety of events, ranging from weddings, conferences, private functions, student club parties, etc. It is common for these venues to have live or DJ



music during the events. During the summer months (~April/May-September/October), a number of events are held outdoors. Each venue operates differently (i.e. hours of operation, alcohol serving times, outdoor music times, number of events).

Residents: There are two residential areas that are nearby to these venues: 1) Green College, which provides year-round housing to 100 graduate and post graduate students, guest house accommodation for up to 10 university visitors and a residence for the Principal of the college, which is the closest to the venues and 2) Chancellor Place neighbourhood, which has a variety of housing including student housing, rental housing and market condominiums. Coast Strata is the closest to the venues.

Noise Concerns: Prior to the development of this guide, the venues and the University received complaints about noise from events at all three venues. Through the development of this guide, noise concerns and ways to minimize noise impacts were discussed with the venue managers, residents and the UNA. This guide is the outcome of these discussions.

UBC North Campus Outdoor Event Planning Principles

The following planning principles summarize the overall approach for hosting events in the north end of the campus. (See *UBC Policy 107, Booking and Rental of UBC Space* for additional guidance):

1. Support and encourage the UBC community to hold academic and community events in the public realm on campus.
2. Minimize noise impacts on university activities (i.e. classes, operations, faculty, administration and students) and residents while maintaining a desired experience by those attending events.
3. Ensure the safety of event participants and the campus community.

Event Management Practices

The following practices summarize the specific recommended actions to be taken by venue operators to minimize noise impacts from outdoor events on university activities and residents.

Additional noise management practices are also included in *The Cecil Green Park House Event and Film Practices*, which were developed in conjunction with this guide and are specific to Cecil Green Park House.

- 1. Advance Notification:** Each venue is responsible for managing advance notification of upcoming outdoor events to adjacent buildings and impacted stakeholders, particularly for weddings and large outdoor events. It is recommended that notices are sent, at a minimum, one week in advance of the events, except when there is a last minute booking.¹ Notices will include the event dates and type of event (wedding, or other private function, etc.) along with contact information. At a minimum, Green College and the University Neighbourhoods Association will be notified. As a courtesy, other adjacent buildings should also be notified, where appropriate.

¹ Koerner's Pub advance notification will differ from the above. Starting in 2017 summer season, they will circulate a list of booked events at the beginning of the season rather than throughout the summer.



2. Outdoor Sound Level Limits

Campus + Community Planning hired BKL Consultants to develop guidelines for playing amplified music in north campus. These guidelines are based on noise testing and analysis that was conducted in the area, in combination with best practices. Consideration was also given to the specific context of the area.

Noise limits in residential areas and at various other points are provided to assist in managing the outdoor music noise from the venues. The following summarizes the recommended sound level limits at both north campus residential areas and at various locations at or near the venues between 10 p.m. and 7 a.m.².

Venues will monitor noise levels at their venues (particularly at MOA and Koerner's) in an effort to meet the noise limits recommended for their venues to help ensure that sound levels in nearby residential areas are kept within the limits outlined in Table 1 below.

North Campus Residential Areas

Below are the recommended noise limits that impact north campus residential areas. These noise limits are defined as being 'measurable at a point of reception', which is defined by the BKL Report as, "A position within the property line occupied by the recipient that best represents the location at which the specific sound emanating from another property is received and the resulting disturbance experienced is at least 1.2m from the surface of the ground and any other sound reflecting surface."

Table 1. Recommended sound limits in north campus residential areas

Day / Time	Predicted Sound Level (Leq)	
	dBA	dBc
Sunday – Thursday 10 p.m. – 1 a.m.	50	60
Friday – Saturday 10 p.m. – 1 a.m.	55	65
All days – 1 a.m. – 7 a.m.	No audible music ³	No audible music ⁴

Note: dBA and dBc are measurement units for sound levels, where dB=decibels; dBA=A-weighting scale, the most widely used sound measuring scale; and dBc=C-weighting scale, a sound scale commonly used for low frequency content (e.g. bass levels).

The BKL Report cautions that due to the nature of the activity at the venues, it is unlikely that the dBc sound limits (audible bass levels) in residential areas will be met without controls to the level and bass content of amplified music levels. Residents should be made aware that the sound limits represent a consensus approach to community noise levels and are typical of similar venues where music is played that varies in not only style but also frequency content and volume. Consequently, there

² These levels were recommended by BKL Consultants based on the nighttime noise environment in North Campus, which when measured was typical of a residential, mixed use commercial zone when compared to noise levels found in other local municipalities. See Appendix 1 for a summary of Municipal and International Noise Limit Standards as well as the "North Campus UBC Event Noise Guidelines – Acoustical Services", BKL Consultants, May 2016, for more details on the approach used to develop these guidelines.

³ For the purposes of these recommendations, the term "no audible music" is defined as the level at which a person with reasonable hearing cannot distinguish music above the background level at a point of reception.

⁴ As above.



may be occasions when the amplified music dBC levels in residential areas will not meet the sound limits detailed in Table 1 between 10 p.m. and 1 a.m. To help address these impacts, venues should consider reducing noise limits after midnight (instead of 1 a.m.), a municipal best practice.⁵

Venue Measurement Locations

Below are the recommended noise levels at Koerner's Pub, MOA and locations near these venues. These levels are within typical range for venues of this nature and can be used to help ensure that the sound levels in nearby residential areas are kept within the limits outlined in Table 1 above.

Recommended noise levels were not identified for events at Cecil Green Park House because no amplified music is played outside after 9 p.m.

Table 2. Recommended sound limits at venue measurement locations

		Predicted Sound Level (Leq)	
Locations	Day / Time	dBA	dBC
Koerner's Pub			
Back patio stairs	Sunday – Thursday 10p -1a	90	94
	Friday – Saturday 10p – 1a	90	99
North side of Peter Wall Centre	Sunday – Thursday 10p -1a	66	77
	Friday – Saturday 10p – 1a	66	82
West side of principal's house	Sunday – Thursday 10p -1a	50	67
	Friday – Saturday 10p – 1a	55	67
MOA			
Top of gravel road by the back of MOA	Sunday – Thursday 10p -1a	77	80
	Friday – Saturday 10p – 1a	77	85
West side of principal's house	Sunday – Thursday 10p -1a	50	71
	Friday – Saturday 10p – 1a	55	71

Key Considerations for Managing Sound Levels:

- The recommended noise limits accommodate both event organizers by varying the noise limits on weekends and weekdays as well as reflect the interests of residents, the receivers of the noise, who can expect the area to more quiet during weekdays.
- It is likely that the venues will need to exercise controls to the volume of the amplification systems in order to meet these sound level limits.
- Multiple measurement locations are provided given the complexity of factors that influence how sound travels. With this in mind, it should not be assumed that if sound levels are met at the venues that the sound levels are being met at other measurement locations. By having multiple measurement locations, venues can better assess the levels at which the sound is travelling toward the residential areas.
- Residents should be made aware that based on the current analysis, it is predicted that the dBA levels from both venues will not exceed the limits set for the hours between 10 p.m. and 1 a.m.. However, the dBC levels may exceed the limits set. The dBC levels are still within typical levels that are expected from

⁵ Starting in the 2017 season, Cecil Green Park House will be ending events booked on Sundays at midnight (instead of 1p) for future event bookings held on Sundays that do not fall on long weekends. Changes in times will begin for events that have not yet been booked.



venues of this nature. During the hours of 1 a.m. to 7 a.m., there will be “no audible music”.

- Venues may want to consider reducing noise limits after midnight (instead of 1 a.m.), a municipal best practice.⁶

Sound Measuring and Monitoring

- Each venue will implement sound measuring and monitoring practices to meet the above sound limits.
- Venue operators will notify third parties who are organizing and playing amplified music of the sound limits and work with them to define the sound limits for their equipment during their events.
- To assist in meeting the above sound levels, venues should consider purchasing sound level monitors. Any sound level meter used for the purpose of monitoring music noise levels should conform to a minimum of Class 2 requirements of ANSI S1.4

3. Venue-specific outdoor equipment setup

Each venue has its unique conditions on how sound travels. The following outlines equipment set-up practices to minimize noise impacts on residents in the area:

Cecil Green Park House

- No amplified music outside after 9 p.m.
- Venue staff will monitor south-east facing windows and doors to ensure they remain closed after 9 p.m. to help contain the noise.

Koerner's Pub

- The outdoor music amplification system at Koerner's Pub should be positioned with the speakers pointing in towards the façade of the building, consistent with the current operating procedure of the venue.

Museum of Anthropology

- As indicated in the BKL report, facing the amplification systems away from the residential areas can result in a distinct reduction in the A-weighted sound levels (up to 6 dBA). This method is not as effective for low frequency noise (1 to 2 dBC) which does not propagate from the speakers in the same manner as mid-high frequency sound. A figure showing the optimal speaker direction is shown below.
- Additionally, positioning the sound stage as far away from the residential areas as possible will provide further attenuation.

⁶ Starting in the 2017 season, Cecil Green Park House will be ending events booked on Sundays at midnight (instead of 1 a.m.) for future event bookings held on Sundays that do not fall on long weekends. Changes in times will begin for events that have not yet been booked.

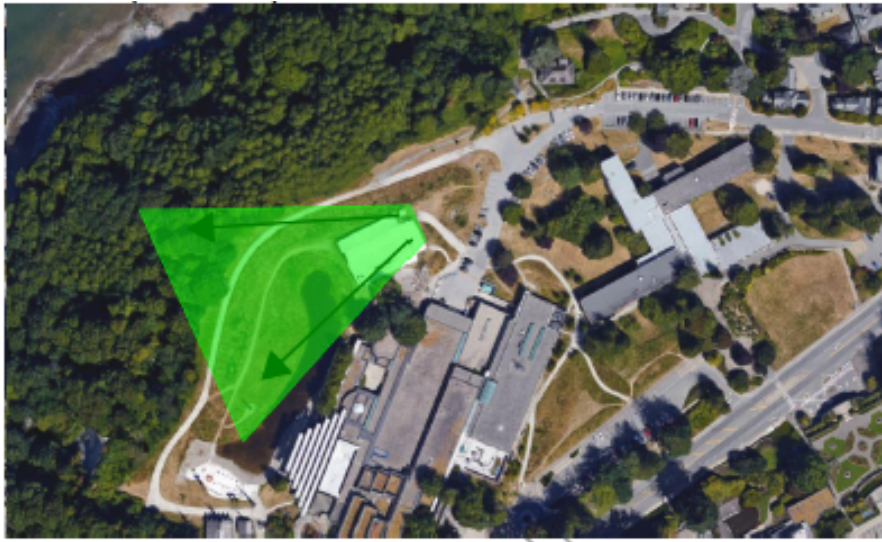


Figure 1: Optimal speaker direction at Museum of Anthropology.

4. Event Staffing:

- All events will have a designated staff contact person with contact information available on the venue website and provided in the advance notification.
- The staff contact is responsible for ensuring that noise levels are managed and being available to address issues, as needed.
- The staff contact person will confirm that third parties are aware of the sound limits and practices that they must adhere to.
- The staff contact person will work with other staff or security on site to encourage patrons to leave events in a quiet manner.

5. Online Communication: Each venue provides information about event management practices on their website (see Appendix 2 for links to each venue's practices).

Information posted includes:

- Commitment to being a good neighbour
- Description of the days and times outdoors events are hosted and a summary of the practices in place to manage noise from events.
- Contact information for venue during events
- Outline of process for residents to notify the venue of concerns and how submissions will be addressed. This could include a phone number or online submission form.

6. Monitoring of Event Management:

- Each venue is responsible for implementing the practices in this guide.
- Each venue will keep a log of complaints.
- The venue operators and Campus + Community Planning will meet as a group after each summer season to debrief any issues, complaints, feedback, etc. for consideration in future event planning.
- If needed, C+CP and the venue operators will come together more frequently to review event planning practices and revise where necessary.
- If needed, C+CP will meet with strata chairs or residential representatives on an ad-hoc basis to discuss concerns.



Appendix 1: Municipal and International Standards

Jurisdiction	Noise Limit Standards	
	dBA (Leq) nighttime	dB(C (Leq) nighttime
University Neighbourhoods Association (Noise Bylaw)	45	65
City of Vancouver (Noise Control Bylaw)	Within an intermediate zone: 1) 65 when received within an activity zone or an event zone or an intermediate zone 2) 50 when received within a quiet zone	65 within any commercial premises
Burnaby (Noise or Sound Abatement Bylaw)	Within a Commercial District, Industrial District, Comprehensive Development District, or Agricultural District: 1) 60 dBA when measured at any point on the property line or within six (6) metres of the property line of the real property from which the said noise or continuous sound is emanating 2) 55 dBA when measured at any point on the boundary or within a Residential District, Public and Institutional District or Multiple Family Residential District	n/a
City of Richmond (Noise Regulation Bylaw)	Within an Intermediate Zone: 1) 70 when received within an activity zone 2) 50 when received within an intermediate or quiet zone	Within an Intermediate Zone: 1) 80 when received within an activity zone 2) 60 when received within an intermediate or quiet zone
City of Seattle and Kings County (Noise Ordinance)	47	n/a
World Health Organization Guidelines	45 for continuous noise 60 maximum level	n/a

Source: North Campus UBC Event Noise Guidelines – Acoustical Services”, BKL Consultants, May 2016.

Appendix 2: Venue-specific event management practices

Each venue has posted their venue-specific event management practices on their websites:

- Museum of Anthropology: <http://moa.ubc.ca/sound-management/>
- Cecile Green Park House: <http://cecilgreenpark.ubc.ca/neighbourhood-policy/>
- Koerner's Pub: <http://koerners.ca/neighborhood-noise-management/>