

Reducing Bicycle Theft at UBC Student Family Residence

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Introduction

The University of British Columbia (UBC) hosts over 10,000 students^[1] in its residences. Developed cycling infrastructure and the large area of the campus make using a bicycle a natural choice for many students. Among these students, student families also benefit from the bike-friendly UBC Vancouver campus infrastructure. These student families reside in the Acadia Park residence. The number of bikes in the ownership of each student family is generally more than one.

Since the start of the COVID-19 pandemic, it has been observed that bike theft has substantially increased in the Student Housing / Acadia Park community. This is partly because student families have mostly stayed on-campus during the pandemic and thus, have become an easy target for bike thieves as they struggle to find bikes elsewhere on campus due to lower influx of students on-campus.

This report will describe the nature of the bike theft problem, highlight community response on possible measures that can be taken to improve the situation, and conclude with some suggestions based on the collected data.

Problem Statement

UBC offers 19 bicycle lockers and 13 free bicycle cages across the campus, and even though Acadia Park is within this boundary, there are no lockers or bike cages present in the vicinity. As a result, residents of Acadia Park, are forced to keep bicycles on their porches (which are open to the street) or tethered to the few unmonitored outdoor racks. In addition to this, due to COVID-19, most of the individual students have moved out of UBC, making Acadia Park residence the most populated area. Due to these factors, Acadia Park has become a targeted spot for increasingly frequent bicycle theft.


Figure A highlights the available bike lockers (marked with ) for bike storage across the UBC Vancouver campus. The area bounded by West 16th Avenue, Acadia Road, and Wesbrook Mall is the Acadia Park residence.


Figure B marks the availability of bike cages across the UBC campus. Bike cages are represented by . Due to unavailability of bike cages in Acadia Park, the area is not shown in Figure B.



Figure A- Bike Lockers across UBC Vancouver Campus [2]

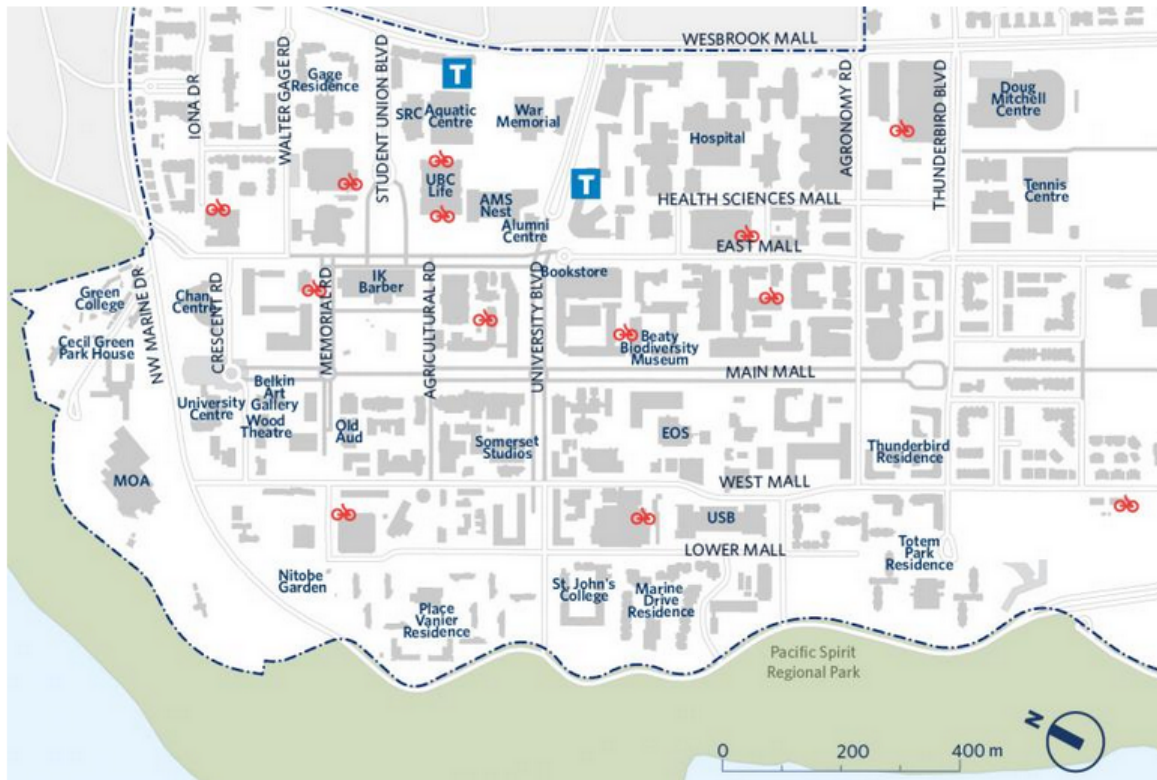


Figure B – Bike cages across UBC Vancouver campus.^[2]

Purpose of the Report

Purpose of this report is to assess the feasibility of installation of CCTV monitored secure bike cages or bike lockers in the Acadia Park community to increase vigilance on bike thieves and provide deterrence to bike theft. This report hopes that it serves as a substantial document that aids in the efforts by UBC Residence Services, and UBC Campus Security to alleviate the nuisance of increased bike theft.

Methodology

The work on this report was divided into the following parts:

1. Gathering proof of increasing bike theft in the community through data collection.
2. Quantifying the problem by identifying how many bikes are in the community and where are they mostly stored / parked.
3. Proposing the solution of installing CCTV camera equipped bike lockers/cages and recording response of the residents on the proposed solution.
4. Identifying how much residents value ease of access over security of bikes.

The data gathered for all the above listed parts was gathered through a survey carried out amongst the Acadia Park residents which contained the following questions:

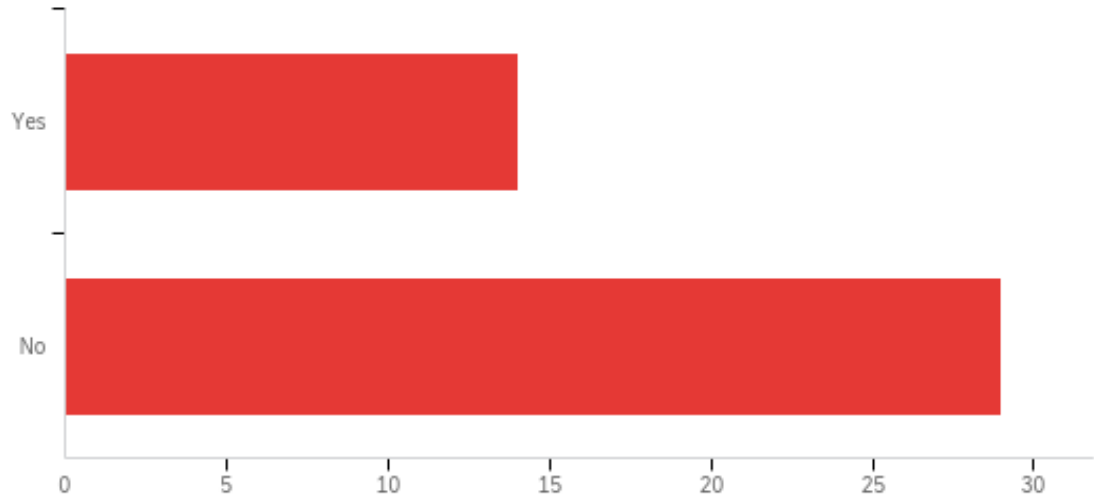
Survey Questions:

1. Have you been a victim of bicycle theft while living in Acadia Park?
 - Yes
 - No
2. Do you know someone in Acadia Park who was a victim of bicycle theft?
 - Yes
 - No
3. How many bikes are in your household?
 - 1-2
 - 3-4
 - 5+
4. I secure my bicycle:
 - at my balcony / patio [no street access]
 - at my balcony / patio [with street access]
 - at the bicycle rack inside my building
 - at the bicycle rack outside the building
 - at bicycle racks near Acadia Commons block
 - at the entrance of the townhouse
 - Storage locker
 - Other
5. As part of a proposed solution: Will you lock your bicycle at a CCTV monitored cage / locker?
 - Yes, only if it is near my residence
 - Yes, even if it is far from my residence (up to 5-minute walk)
 - No, I prefer keeping it at the current location

Survey Results and Analysis

43 responses were gathered from the survey. Following are the results of the survey:

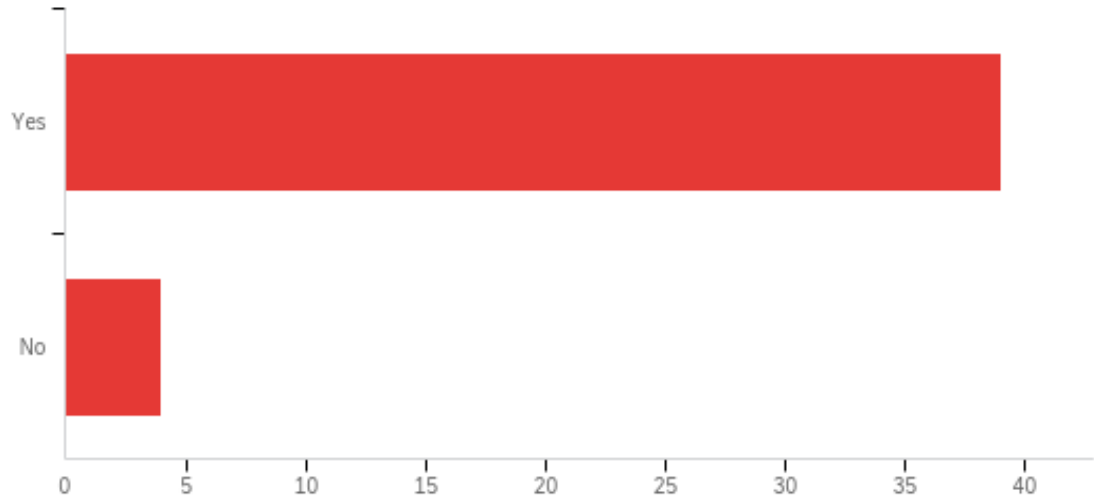
Q1. Have you been a victim of bicycle theft while living in Acadia Park?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Have you been a victim of bicycle theft while living in Acadia Park?	1.00	2.00	1.67	0.47	0.22	43

#	Answer	%	Count
1	Yes	32.56%	14
2	No	67.44%	29
	Total	100%	43

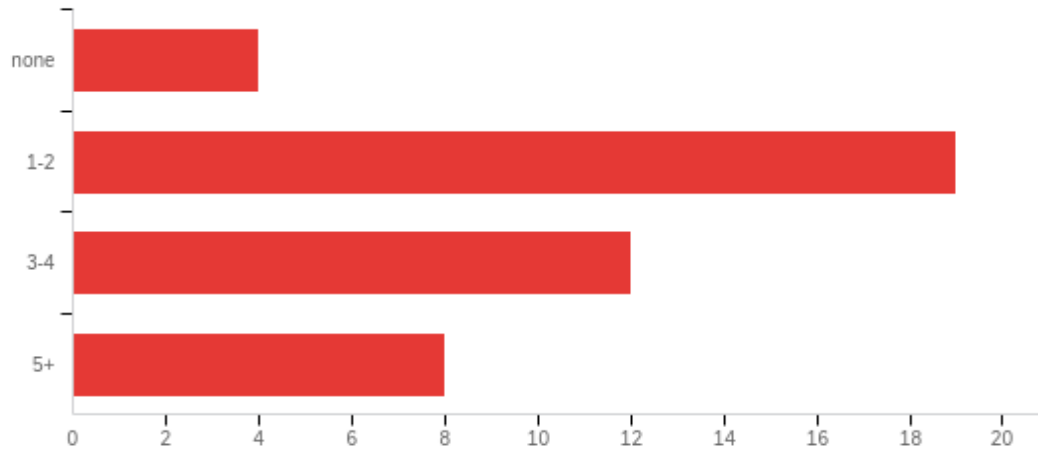
Q2 - Do you know someone in Acadia Park who was a victim of bicycle theft?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you know someone in Acadia Park who was a victim of bicycle theft?	1.00	2.00	1.09	0.29	0.08	43

#	Answer	%	Count
1	Yes	90.70%	39
2	No	9.30%	4
	Total	100%	43

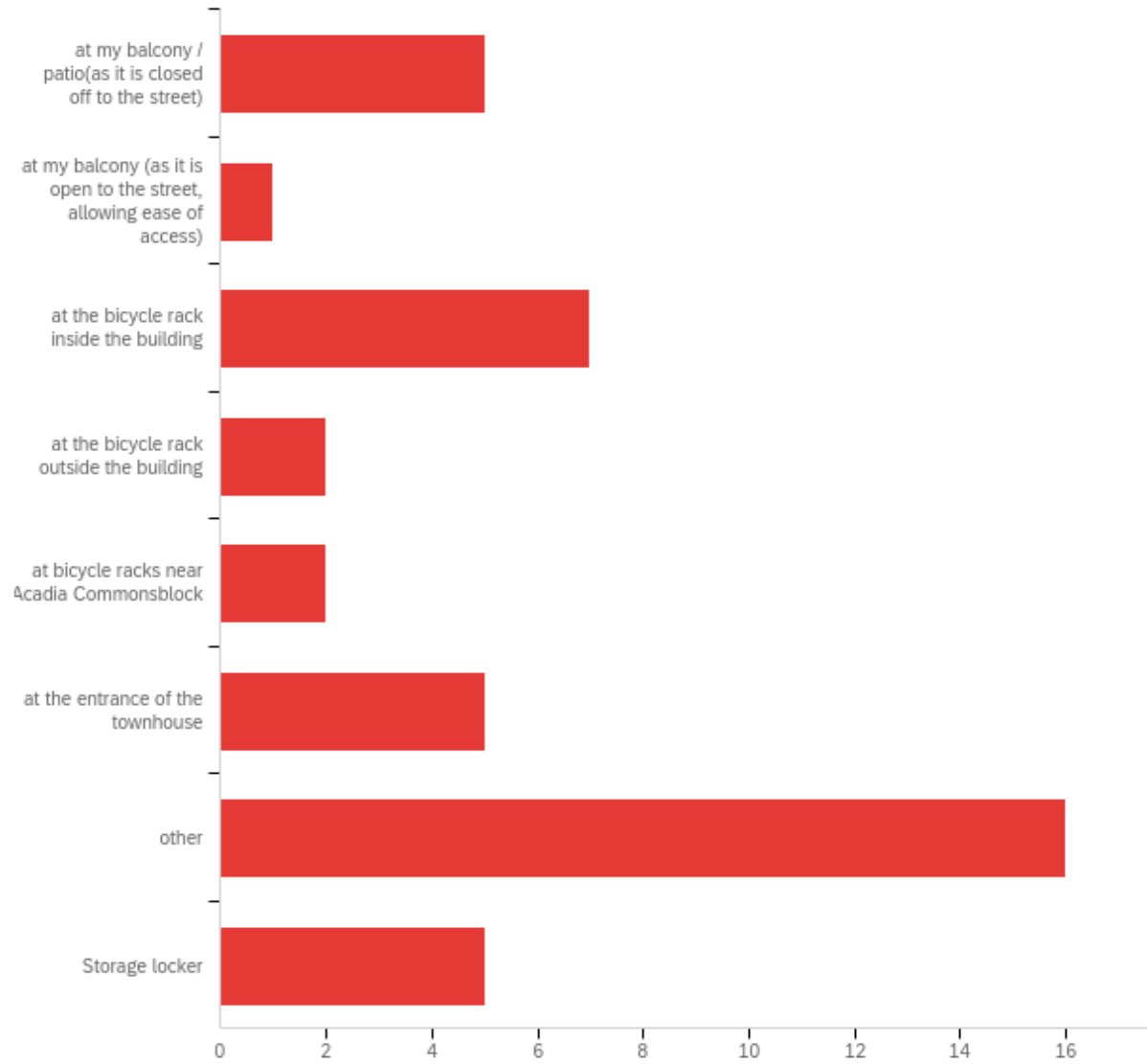
Q3 - How many bicycles are there in your household?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	How many bicycles are there in your household?	1.00	4.00	2.56	0.90	0.80	43

#	Answer	%	Count
1	none	9.30%	4
2	1-2	44.19%	19
3	3-4	27.91%	12
4	5+	18.60%	8
	Total	100%	43

Q4 - I secure my bicycle

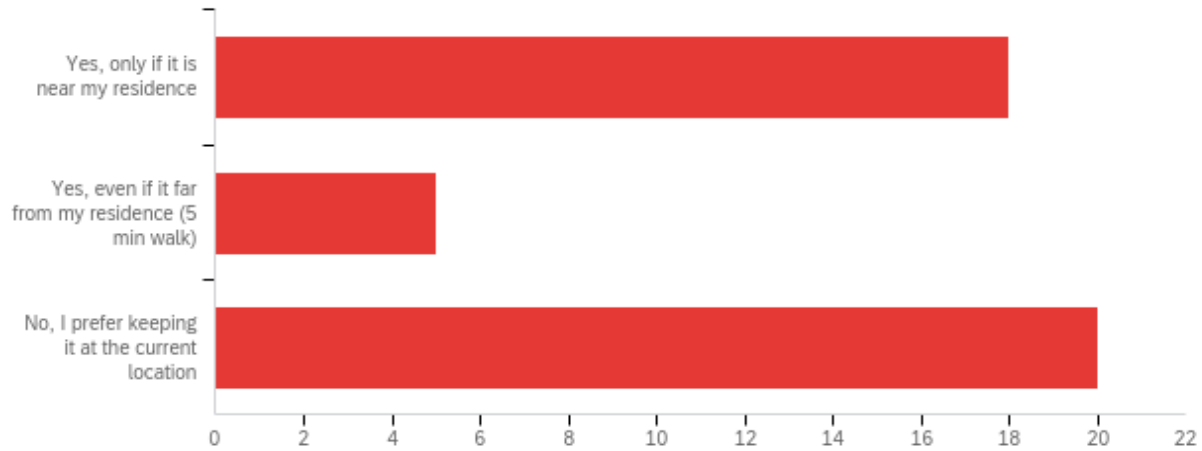


Reducing Bicycle Theft at UBC Student Family Residence

#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	I secure my bicycle	1.00	8.00	5.30	2.31	5.33	43

#	Answer	%	Count
1	at my balcony / patio (as it is closed off to the street)	11.63%	5
2	at my balcony (as it is open to the street, allowing ease of access)	2.33%	1
3	at the bicycle rack inside the building	16.28%	7
4	at the bicycle rack outside the building	4.65%	2
5	at bicycle racks near the Acadia Commons block	4.65%	2
6	at the entrance of the townhouse	11.63%	5
7	other	37.21%	16
8	Storage locker	11.63%	5
	Total	100%	43

Q5 - As part of a proposed solution: Will you lock your bicycle at a CCTV monitored cage/locker?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	As part of a proposed solution: Will you lock your bicycle at a CCTV monitored cage/locker?	1.00	3.00	2.05	0.94	0.88	43

#	Answer	%	Count
1	Yes, only if it is near my residence	41.86%	18
2	Yes, even if it far from my residence (5 min walk)	11.63%	5
3	No, I prefer keeping it at the current location	46.51%	20
	Total	100%	43

Analysis

32.5% of the respondents have been a victim of bike theft whereas, 90% of the respondents at-least know one person of the community that has been a victim of bike theft. Considering most people that know someone who has been a victim of bike theft in the community, it is safe to assume that the level of bike theft has become alarming.

72% of the survey respondents own between 1-4 bicycles in their household. Whereas, 18% own 5 or more bicycles. Hence, the magnitude of this problem is large and effects majority of the residents. Considering that average used bicycle costs around \$250 ^[3], it is estimated that due to bike theft, a student family may lose up to \$1000 on average (2 bike / per household). The financial loss increases if bicycle were purchased new. Since, the household income of most student families is below the national average (due to being committed to fulltime studies) the impact of financial loss due to bike theft is more severe.

Nearly 56% of the respondents store their bicycle in areas that are less secure. These areas include storing bikes on road accessible patios, at the entrance / outside of the townhouses, bicycle racks outside of buildings (where there is no surveillance), and various other locations that can not be considered secure. This indicates the need of secure bike storage locations within the community.

52.5% of the survey respondents are open to the idea of installing CCTV monitored bike storage lockers/cages in the community. Among the 52.5% in favour, 11.6% of the respondents are even willing to store their bikes at locations that are 5 minutes walk away from their residence. Furthermore, it can be observed that the percentage of respondents with unsecure bicycles (56%) and those who are in favor of installing CCTV monitored storage solution (52.5%) are quite near. Hence, it can be deduced that those who are in favour of having a CCTV monitored bike storage are mostly the same people whose bikes are currently unsecured.

Recommendations and Conclusion

In light of the survey results and analysis carried out, providing Acadia Park residents with CCTV monitored bike storage solution is recommended. If we consider this survey response representing the entire Acadia Park community, 56% of the residents have their bicycles currently unsecure due to unavailability of infrastructure. Increasing theft and unsecure storage of bicycles have resulted in substantial financial loss in this community. It is hoped that UBC Residence Services may initiate the process of installation of the proposed bicycle storage racks based on the findings of this report.

References

- [1] "UBC Vancouver Living in Residence." *UBC*, you.ubc.ca/ubc-life/vancouver/residence/
- [2] "Bicycle Parking." Bicycle Parking | UBC Campus & Community Planning, planning.ubc.ca/transportation/cycling/bicycle-parking.
- [3] Mckenzie, Kevin Hinton & Ryan. "Where to Buy a Bicycle in Vancouver." *BCLiving*, 3 Nov. 2010, www.bcliving.ca/where-to-buy-a-bicycle-in-vancouver.

Formal Report Proposal

To: Dr. Erika Paterson, ENGL 301 99A Instructor

From: Anusha Saleem, ENGL 301 99A Student

Date: November 7th, 2020

Subject: Proposal to Reduce Bicycle Theft at UBC Student Family Residence (Acadia Park)

Introduction:

One of the quickest and most enjoyable ways to travel around the UBC campus is on a bicycle. Cycling is convenient, inexpensive, and healthy. Moreover, UBC is committed to supporting the campus community by continuously expanding on-road infrastructure and cycling resources. Part of that infrastructure involves providing ample locations on where to securely lock the bicycles. However, these locations are scarce at the UBC Student Family Residence, named Acadia Park.

Statement of Problem:

UBC offers 19 bicycle lockers and 13 free bicycle cages across the campus, and even though Acadia Park is within this boundary, there are no lockers or bike cages present in the vicinity. As a result, residents of Acadia Park, composed of student families with children, are forced to keep bicycles on their porches (which are open to the street) or tethered to the few unmonitored outdoor racks. In addition to this, due to COVID-19, most of the individual students have moved out of UBC, making Acadia Park residence the most populated area. Due to these factors, Acadia Park has become a targeted spot for increasingly frequent bicycle theft.

Proposed Solution:

A proposed solution would involve UBC Student Housing to liaise with UBC Campus Security and provide CCTV monitored bicycle cages/lockers for the eight residential buildings that make up Acadia Park. The 24/7 surveillance will discourage thieves and provide compelling video evidence in case a theft does occur. This solution will also go hand-in-hand with UBC's commitment to supporting and protecting the campus community from theft and loss of property.

Scope:

To analyze the feasibility of implementing the proposed solution, the following questions will be asked to the residents of Acadia Park:

1. How many bicycles are there on average per household? Therefore, how many bicycles are there on average per residence?
2. Is locking your bicycle at a nearby location important to you?
3. Would you lock your bicycle at a cage/locker if that area is under surveillance?
4. What if the monitored bicycle cage/locker were far from your residence?
5. Where do you lock your bicycle?
6. Why do you choose to lock your bicycle on your porch?
 -
 - Because of its quick accessibility
 - Because the bicycle rack of your building is overcrowded
 - Because you feel that your bicycle has a higher chance of being stolen from the available rack

Methods:

The primary source of data collection would be through virtual interviews with Acadia Park residents. In addition to the interviews, data will also be gathered through formulated surveys that will be posted on both the UBC Families and Acadia Park Facebook groups.

Intended Audience:

This report will be presented to the UBC Student Housing- Student Family Residence Manager. It will propose a solution to reduce bicycle theft and will be supported by the consolidated results of the aforementioned interviews and surveys amongst the residents.

Qualification:

As an Acadia Park resident and bicycle owner, the increasing frequency of bicycle theft in the neighbourhood is a matter of concern, which needs to be addressed.

Conclusion:

In conclusion, the implementation of a CCTV monitored bicycle cages/locker system in each residence is beneficial to the neighbourhood and will help in reducing bicycle theft in the area.