



A COMPREHENSIVE GUIDE TO

CREATING AN INTEGRATED UNIVERSITY CAMPUS

QUEEN'S UNIVERSITY SCHOOL OF URBAN & REGIONAL PLANNING



PROLOGUE



The purpose of this report is to provide an informational document for reference in future decision making for campus planning at Queen's University. Toward this objective, two key research components are carried out: investigating best practices in integrated university campus design and conducting an analysis of local conditions. First, integrated university campus planning is examined to explore the opportunities available to Queen's University as a campus embedded in an urban and residential context. Then, in the second component, attention is focused on establishing a near-campus community profile for the St. Mary's of the Lake site given its recent acquisition. Here, a better understanding of the neighbourhood context is established through a socio-demographic analysis and an analysis of assets and gaps within the community (including a land use inventory). To this extent, the information provided in this report will be informative when considering future updates to the Campus Master Plan, last updated in March 2014.



In November 2017, Queen's University purchased the St. Mary's of the Lake property, formerly a hospital owned by Providence Care. Located between Queen's main and west campus sites, adjacent to Queen's Isabel Bader Centre for Performing Arts on King Street, and in close proximity to the Donald Gordon Conference Centre, this new property is ideally located to serve as a third campus for the Queen's University community. With one existing building that was constructed in four stages and considerable surface parking and greenspace, future planning efforts will be challenged with envisioning how this 12-acre property will be used in the years ahead. Given the site's status as a relatively new and undeveloped property for Queen's, yet situated in an established neighbourhood, this report investigates the greater university-community context of the site.

EXECUTIVE SUMMARY

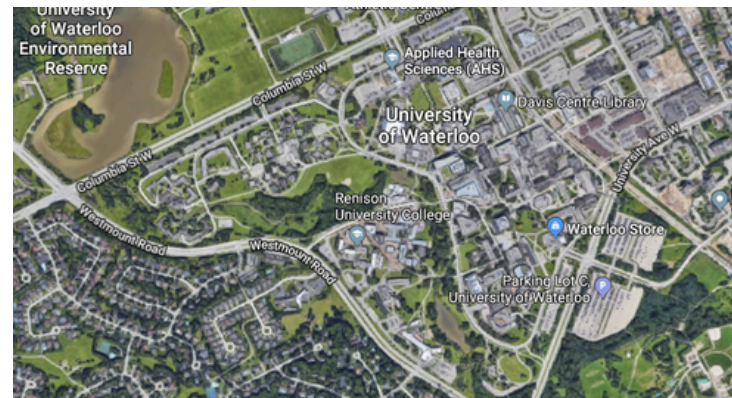
SECTION 1: WHAT IS AN INTEGRATED UNIVERSITY CAMPUS?

Two prominent and polarizing schools of thought that have emerged in the realm of campus master planning broadly leading to the formation of either an integrated university campus (IUC) or a non-integrated university campus (NIUC). Chapter 1 presents the historical context and physical design elements of the approaches. While NIUCs are established using restrictive design strategies such as gates, ring roads and inward facing walls to enclose campus edges and exclude those who are not part of the academic constituency, IUCs blur the edges of campus to establish connections with the surrounding community. Hence, IUCs present the university as a welcoming and inviting constituent of the community, placing design features such as outward-oriented buildings, buildings constructed to the property line and mixed-use developments at campus edges. Considering the implications of both design strategies, we argue for the adoption of an IUC approach to campus planning..

Historically, campuses were very closely connected with the city in which they were situated. However, the twentieth century brought forth new forms of transportation that created escape routes to rural areas which were targeted by some academic institutions for their peaceful and abundant landscapes. It was felt that parkland settings would be more



University of Ottawa Campus Master Plan (2015) design scheme shows its integration with the surrounding residential area by building to the property line.



The University of Waterloo separates itself from the surrounding residential neighbourhood through the use of large parking lots and ring roads.



Brown University in Providence, RI uses ornate gates to separate the campus from the community, signalling to community members that they are not welcome on campus.



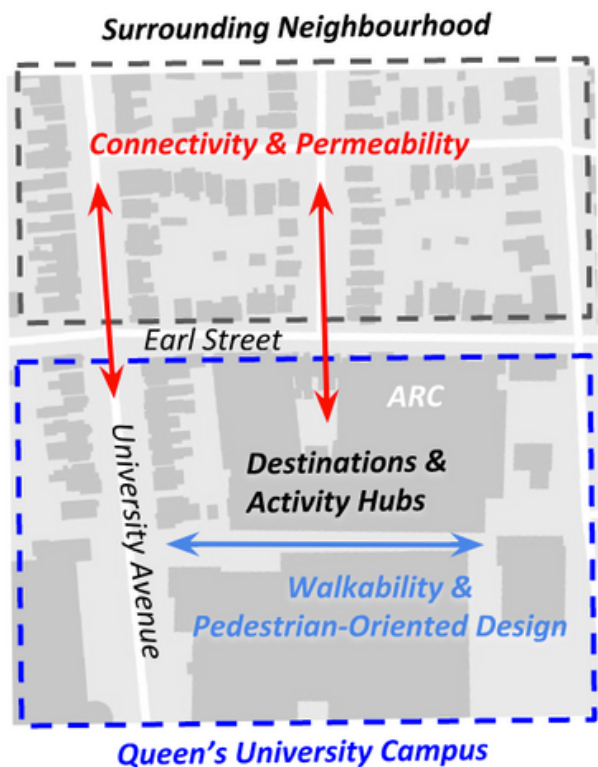
Simon Fraser University in Burnaby, BC separates itself from the community geographically through its location atop a mountain overlooking the city.

conducive to creative thinking [1]. This seclusion was also pursued in the urban context by large established universities, demolishing nearby businesses and residences to establish a degree of separation from the city.

This pursuit of an NIUC led to unintended consequences. This approach resulted in fragmented and sprawling campus settings [2], eroding the sense of a university community. Disengaged with surrounding neighbourhoods and projecting an aura of exclusivity, universities often faced increased tensions in maintaining positive town-gown relations [3]. Hence, IUCs are re-emerging to rebuild strong community relationships and stitch universities back into the urban fabric. Deliberately constructed to improve town-gown relations and integrate with the greater university community, recent IUC developments are incorporating amenities, services and events that serve not only the direct constituents of the university but the neighbouring community as a whole [4].

WHAT ARE THE ELEMENTS OF AN INTEGRATED UNIVERSITY CAMPUS?

Chapter 2 assembles actions for increasing campus integration into three core objectives: enhancing neighbourhood connectivity and permeability, designing streets and landscapes that are walkable and built with pedestrian-oriented design, and creating destinations and activity hubs.



Concept diagram of the integration between Main Campus and its surroundings. Adapted from Hajrasouliha (2018).

Connectivity & Permeability



University buildings along University Ave. mimic residential development in the neighbourhood, face the street, and act as a soft edge to the city. (Queen's Journal).

An integrated university campus is connected to the surrounding neighbourhood and permeable to public access, with structural links and an intentional openness to the neighbouring environment. The greatest potential to enhance connectivity and permeability between the campus and surrounding community exists at the edge of these two realms. Here, new developments should be built to the edges of plots: meeting the city grid and interacting with the existing public realm to provide an active frontage onto the street. [5,6] Similarly, attention should be placed on small-scale design features, such as shrubs, gates, lighting, and fences: establishing identifiable features to reinforce a shared campus and community identity. To blur the distinction between campus and community, future developments should mimic the surrounding environment by incorporating design elements from the community and building to a scale that is compatible with neighbouring structures. [7]

Walkability & Pedestrian-Oriented Design



The pathway between the Athletics & Recreation Centre and the John Deutsch University Centre connects University Ave. to Division St. for pedestrians. (Fitzgerald, 2018).

Walkable and pedestrian-oriented campus spaces provide an essential link for integrated university campuses between desirable campus destinations and the campus edge. Walkability is improved by building over void spaces that disrupt the pathway network. Such void spaces include sprawling surface parking lots that act as barriers to pedestrian movement and lengthen the distance between campus destinations. Similarly, walkability can be impeded by stark and massive buildings which form campus walls. Hence, new buildings should be pedestrian-oriented, presenting an active frontage onto both internal and external campus walkways, meeting the city grid and incorporating design features such as street-level windows and greater entrances. [8] To sustain walkability, the walls of future developments can also be broken up to include access through and around new buildings. [9]

Destinations & Activity Hubs



The food court (left) and gym (right) in the Athletics & Recreation Centre act as a destination hub for Main Campus (Fitzgerald, 2018).

Integrating the campus and neighbouring community includes creating destinations that are accessible and attractive to the community, drawing the public into campus. These destinations can be established by grouping compatible uses together into activity hubs and designing buildings to suit multiple functions, producing more vibrant shared spaces. Open and inviting to the surrounding community, these quasi-public spaces foster key cultural bridges between town and gown. [10] Using destinations to weave the university into the greater civic fabric is perhaps most immediately established by filling gaps in the surrounding neighbourhood. The appropriate mix may include a variety of office, retail, cultural, recreational, residential and academic spaces. As such, universities are looking to the surrounding neighbourhoods to evaluate and determine the extent to which they can address gaps in available amenities. [11] Developing these more impactful layers of shared campus-community services requires a solid understanding of neighbourhood characteristics and what strengths already exist within the community

SECTION 2: ESTABLISHING A NEAR-CAMPUS COMMUNITY PROFILE

Chapter 3 conducts a socio-demographic analysis of the neighbourhood surrounding the St. Mary's site (see boundaries in Figure E3). Key socio-demographic indicators are explored using census tract (CT) level data from Statistics Canada, including historical analyses and comparative analyses to Kingston at the census metropolitan area (CMA) level where appropriate.

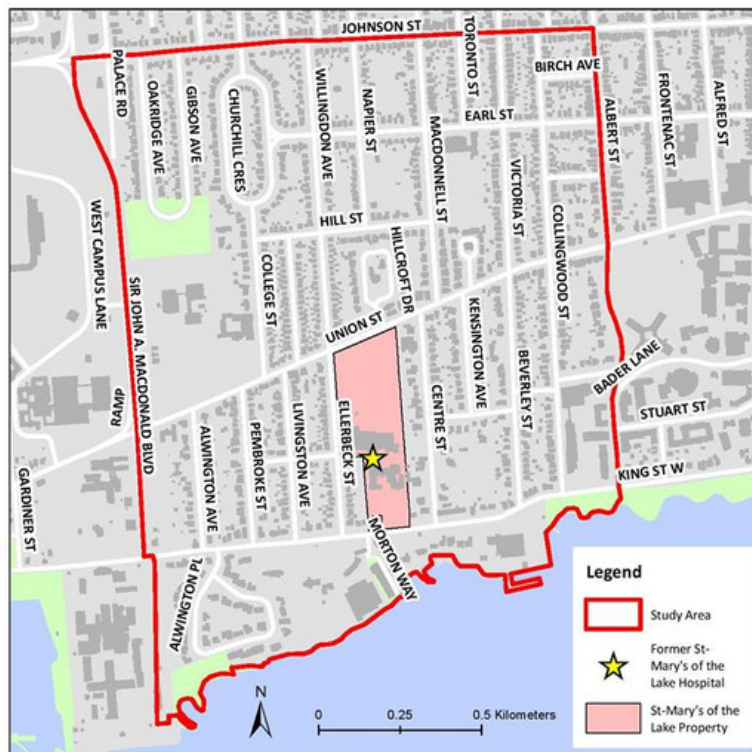


Figure E3: Site and Study Area Boundaries

The study area was found to have a relatively high rate of ethnocultural diversity (18% immigrants and 3% non-permanent residents) when compared to Kingston (12% and 1% respectively). Study area residents are also highly educated, with 62% holding at least a bachelor's degree, compared to just 25% in the Kingston CMA. Of those residents who are employed (63%), most work in the sectors of education, law and social, community and government (30%), and health (18%). Residents were also found to live within close proximity of their place of work, as indicated by their high use of active transportation for commuting (30% walked and 17% biked) and short commute times (54% with a commute of less than 15 minutes). Consequently, many study area residents are employed by Queen's (42% of residents age 20 to 64).

Annual household incomes in the study area were found to be high (median total income of \$121,472 before tax) when compared to Kingston (median total income of \$71,195 before tax), with roughly one quarter of study area households earning over \$100,000. Most households in the study area are single family homes (67%), with a great number containing only two persons (48%). Home ownership rates in the study area are high (80% compared to 66% for Kingston), with a housing stock that is primarily composed of single detached homes (78%). Of all couples in the study area, 54% have at least one child.

The results of the socio-demographic analysis describe a neighbourhood that is likely to have a keen interest in future development of the St. Mary's site. Residents living in the study area are more educated and affluent on average than the rest of Kingston. Residents are financially invested in the community, with 80% owning their homes. Finally, residents are largely employed by nearby businesses and especially by Queen's. Hence, residents may have a dual interest in the site as existing employees of the university.

Land Use, Infrastructure & Amenities

While a socio-demographic analysis provides a description of the residents living in the study area, it is equally important to describe physical context of the neighbourhood when envisioning opportunities for increasing university-community benefits during future development on the St. Mary's of the Lake site. As such, Chapter 4 carries out a thorough analysis of the physical context surrounding the St. Mary's of the Lake site and identifies assets and gaps in how the community is served by the existing amenities of the neighbourhood.

First, this chapter introduces the guiding principles set by the 2014 Queen's University Campus Master Plan (CMP). Following the 'Campus at the City Scale' theme identified in the 2014 CMP, an exploration of the City's land use designations within the study area, and the relevant City of Kingston Official Plan (OP) policies that impact future planning

on the site is carried out. Policy directives supporting university development that is sensitive to the greater community context are identified within section 3.5.A.2 of the City's OP. Here, the City's OP explicitly states the importance of cooperation between the City, the community, and the University with concern for minimizing the adverse effects of the University on the surrounding neighbourhood.

Looking at land uses in the study area, the majority are residential (70%) and institutional (25%), with some open space (4%), environmentally protected areas (<1%) and neighbourhood commercial (<1%) (see Figure E4).

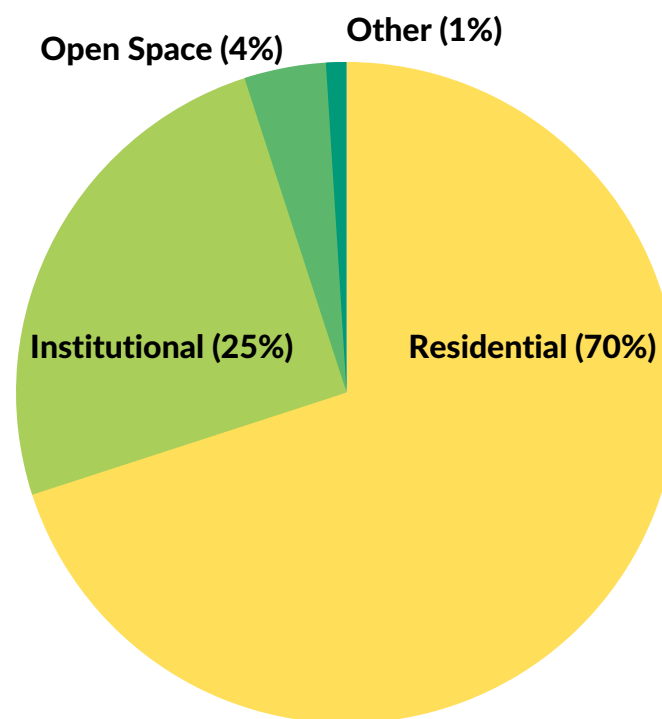


Figure E4: Study area land use break-down by percentage of total available land.

Considering the potential for change in the physical context of the neighbourhood, both the St. Mary's site and adjacent study area are located within a Near Campus Neighbourhood planning area. Following the conclusion of an ongoing study of Near Campus Neighbourhoods, the City of Kingston may identify the area as having the potential to support intensified residential development such as medium- and high-density buildings.



Aerial view of the site and its embedded location within a residential neighbourhood. (Google, 2018).

Next, the chapter uses the LEED®-ND framework to describe and map assets and gaps in the community, identifying areas for further consideration in future site redevelopment. The LEED®-ND criteria are representative of principles of Smart Growth and New Urbanism and closely align with the underlying principles of building an integrated university campus.

Using these criteria, the following are identified as near-campus **assets**:

- smart locations,
- tree-lined and shaded streets,
- reduced automobile dependence,
- transportation demand management,
- access to public space and recreation, and,
- neighbourhood schools.

The remaining criteria represent areas for **further consideration** in site redevelopment to respond to gaps in the surrounding neighbourhood. Of these, some criteria are already aligned with priorities set in the 2014 Queen's Campus Master Plan (CMP) and should be carried forward, including:

- housing and jobs proximity,
- walkable streets,
- mixed-use neighbourhood centres,
- compact development,
- connected and open community,
- transit facilities,
- bicycle networks and storage,
- community outreach and involvement, and
- reduced parking footprint.

Those criteria **not** prioritized in the 2014 CMP are flagged for future updates of the Campus Master Plan, including:

- mixed-income diverse communities,
- visitability and universal design, and
- local food production.

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