3085 Hurontario Street

Shadow Study Report

Prepared for: 3085 Hurontario St, Mississauga, ON

18 September 2024



Sun and Shadow Analysis Summary

3085 Hurontario St, Mississauga, Ontario, L5A 4E4, Canada

PAGE | 2 PROJECT NR. | 850010
DATE | 19 SEP 24 HURONTARIO ST, MISSISSAUGA ON



The following information has been prepared by 3XN GXN and is to be read in conjunction with the shadow diagrams.

Site Latitude and Longitude

Latitude: 43.582390 Longitude: -79.618420

43°34′56″N 79°37′06″W

Time Zone

Daylight Saving Time GMT-4/Standard Time GMT-5

Astronomic North and Software Use to Prepare Shadow Analysis

The North Arrow in the Survey was used to set up the True North in Revit 2025.

This Survey was prepared by: R-PE Surveying Ltd. Ontario Land Surveyors on February 8th, 2021.

The base plan originated from the survey above and Open Street Map.

The project site latitude and longitude were entered into Autodesk Revit 2024 which geolocates the site and the orientation to astronomical north established accurate shadows of the development.

Origin of Base Plan

The base plan was taken from the survey above, Open Street Map and Google Maps.

3.1 Residential Private Outdoor Amenity Spaces Analysis

Private residential outdoor amenity spaces near the development is indicated in the shadow studies diagrams. No private residential amenity spaces are impacted by the subject development.

3.2 Communal Outdoor Amenity Areas Analysis

Communal outdoor amenity areas comprise of:

(A) Five communal swimming pools to the east of the site that belong to adjacent apartment buildings,

- 1. 3151 Jaguar Valley Pool (NE Communal Pool)
- 2. 3131 Kirwin Pool (Kirwin Communal Pool)
- 3. 3120 Kirwin Pool (SE Communal Pool)
- 4. 3170 Kirwin Ave (East Private Pool)
- 5. 3100 Kirwin Ave Pool (SE Private Pool)
- (B) 3100 Kirwin Ave outdoor tennis courts, east of the subject site
- (C) The subject development L4 + L7 outdoor terrace amenity spaces on Tower 1, 2, 3 and 4
- (D) The subject development site amenity spaces at grade (Courtyard, Gateway Plaza, Outdoor Amenities)
- (E) TL Kennedy Secondary School to the west with their outdoor fields further westward

These are noted on each of the shadow studies with labels. The criterion is met if there is no shadow impact from the development for at least half the test times or 50% sun coverage all the time.



June 21:

- (A) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.
- (B) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.
- (C) Shadows from proposed developments allow for 58% sun coverage on the site outdoor amenity spaces on L4 and L7 terraces; therefore the criteria has been met.
- (D) Shadows from proposed developments allow for 53% sun coverage on the site outdoor amenity spaces at grade; therefore the criteria has been met.
- (E) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.

September 21:

- (A) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.
- (B) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.
- (C) Shadows from proposed developments allow for 65% sun coverage on the site outdoor amenity spaces on L4 and L7 terraces; therefore the criteria has been met.
- (D) Shadows from proposed developments allow for 53% sun coverage on the site outdoor amenity spaces at grade; therefore the criteria has been met.
- (E) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.

December 21:

- (A) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.
- (B) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.
- (C) Shadows from proposed developments allow for 64% sun coverage on the site outdoor amenity spaces on L4 and L7 terraces; therefore the criteria has been met.
- (D) Shadows from proposed developments allow for 55% sun coverage on the site outdoor amenity spaces at grade; therefore the criteria has been met.
- (E) Shadows from proposed developments allow for more than 50% sun coverage all the time on the above communal amenity space; therefore the criteria has been met.

T1-T4 TERRACE AMENITY SUN ACCESS FACTOR FROM DEVELOPMENT					
TIME	SUN ACCESS FACTOR				
21-Jun	0.60				
21-Sep	0.66				
21-Dec	0.65				
TOTAL	0.64				

Figure 1: T1-T4 Terrace Amenity Sun Access Factor Calculations

T1-T4 GROUND FLOOR AMENITY SUN ACCESS FACTOR FROM DEVELOPMENT					
TIME	SUN ACCESS FACTOR				
21-Jun	0.53				
21-Sep	0.53				
21-Dec	0.55				
TOTAL	0.54				

Figure 2: T1-T4 Ground Floor Amenity Sun Access Factor Calculations



3.3 Public Realm Analysis

The area of Hurontario and Kirwin is considered Mixed Use, Commercial, Employment and High-Density Residential Street.

Public Open Spaces close to the subject site include John C Price Park in the SE direction and Richard Jones Park to the East.

John C Price Park has Sun Access Factor of 99% in December, 90% in September and 100% in June.

Richard Jones Park has Sun Access Factor of 99% in December, 100% in September and 100% in June.

JOHN C PRICE PARK SUN ACCESS FACTOR FROM DEVELOPMENT					
TIME	SUN ACCESS FACTOR				
21-Jun	1.00				
21-Sep	0.90				
21-Dec	0.99				
TOTAL	0.96				

Figure 3: John C Price Park Sun Access Factor Calculations

RICHARD JONES PARK SUN ACCESS FACTOR FROM DEVELOPMENT					
TIME	SUN ACCESS FACTOR				
21-Jun	1.00				
21-Sep	1.00				
21-Dec	0.99				
TOTAL	1.00				

Figure 4: Richard Jones Park Sun Access Factor Calculations

Impact on Sidewalks, Public Open Spaces, Parks and Plazas:

The development allow full sunlight on the opposite boulevard including the full width of the sidewalk on September 21st. The two roads included in the calculations are Kirwin Ave to the North and Hurontario Street to the West of the site. The data below shows at least 5 hours of no shadow from subject development; therefore the criteria has been met.

TOWERS	SHADOWS			NO SHADOW
TOWERS	9:12 to 11:12am	12:12 to 2:12pm	3:12 to 5:12pm	(9:00-5:00pm)
T1 to HURONTARIO STEET WEST	1 HOUR	NO SHADOW	NO SHADOW	8 HOURS
T1 to KIRWIN AVE NORTH	2 HOURS	1 HOUR	NO SHADOW	6 HOURS
T2 to HURONTARIO STREET WEST	1 HOUR	NO SHADOW	NO SHADOW	8 HOURS
T2 to KIRWIN AVE NORTH	2 HOURS	NO SHADOW	NO SHADOW	7 HOURS
T3 to HURONTARIO STREET WEST	1 HOUR	NO SHADOW	NO SHADOW	8 HOURS
T3 to KIRWIN AVE NORTH	2 HOURS	NO SHADOW	NO SHADOW	7 HOURS
T4 to HURONTARIO STREET WEST	NO SHADOW	NO SHADOW	NO SHADOW	8 HOURS
T4 to KIRWIN AVE NORTH	3 HOURS	1 HOUR	NO SHADOW	5 HOURS

Figure 7: Public Sidewalks Sun Access Factor Calculations

3.4 Turf and Flower Gardens in Public Parks

There are no turf areas or flower gardens within the shadow test area.

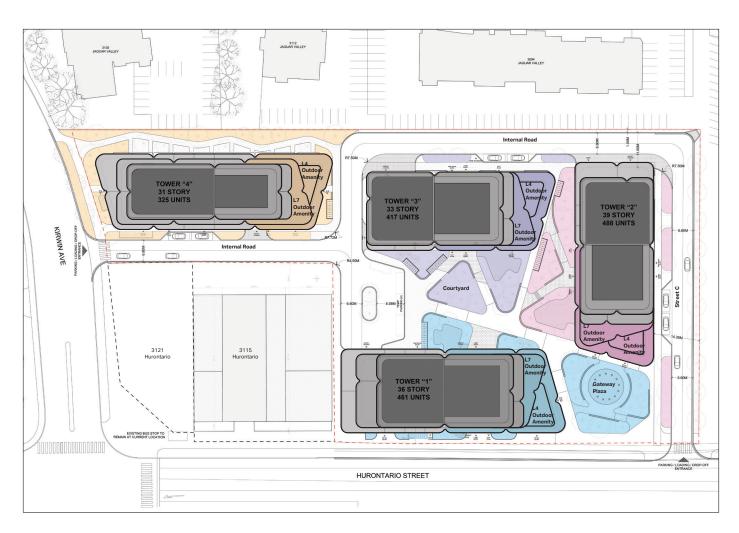
3.5 Building Faces to allow for the possibility of using Solar Energy

There are no adjacent low rise residential buildings (defined as one to four storeys) in the vicinity of 3085 Hurontario. Any surrounding residential is comprised of 5 storeys or more apartment buildings.

Analysis and Mitigation Plan

The proposed development meets the shadow impact criteria for all existing amenity areas and public spaces.





Key

- Project Site
- Tower Locations
- 3085 Tower 1 Outdoor Amenity
- 3085 Tower 1 L4+L7 Terrace Outdoor Amenity
- 3085 Tower 2 Outdoor Amenity
- 3085 Tower 2 L4+L7 Terrace Outdoor Amenity
- 3085 Tower 3 Outdoor Amenity
- 3085 Tower 3 L4+L7 Terrace Outdoor Amenity
- 3085 Tower 4 Outdoor Amenity
- 3085 Tower 4 L4+L7 Terrace Outdoor Amenity

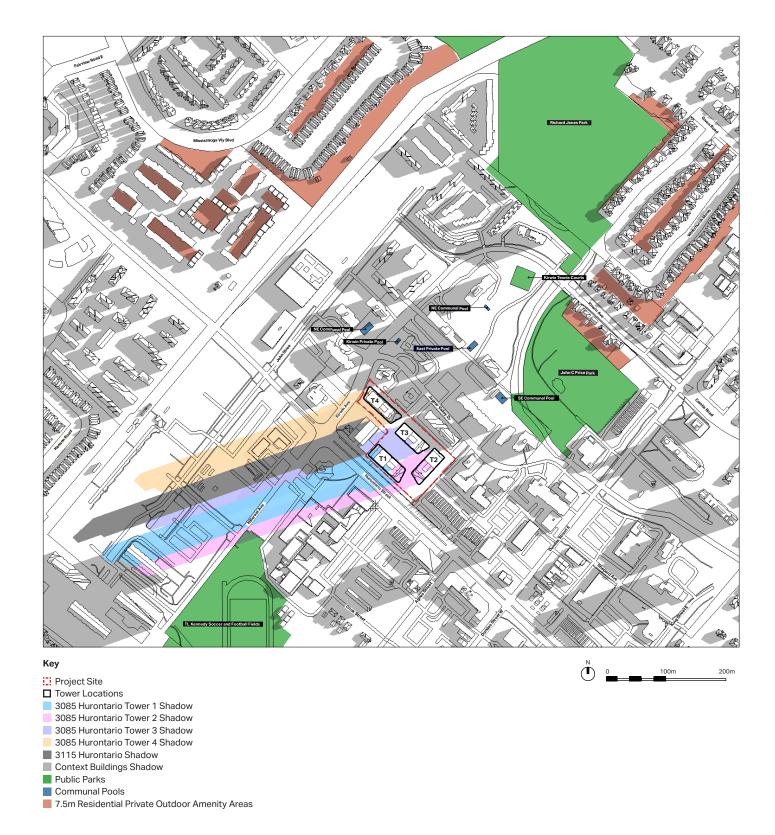
June 21st

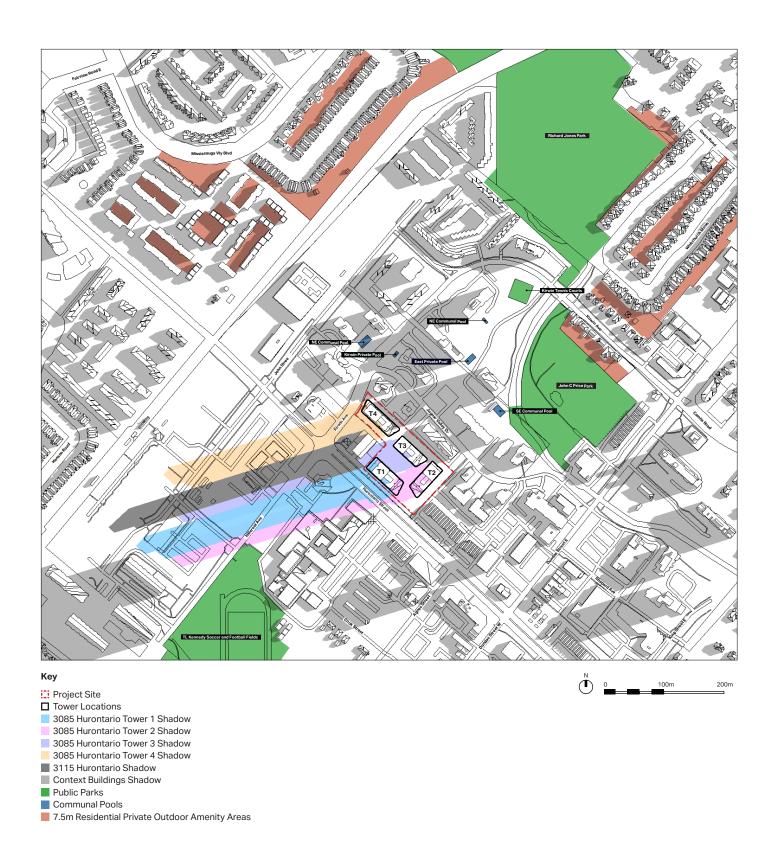
3115 Hurontario ShadowContext Buildings Shadow

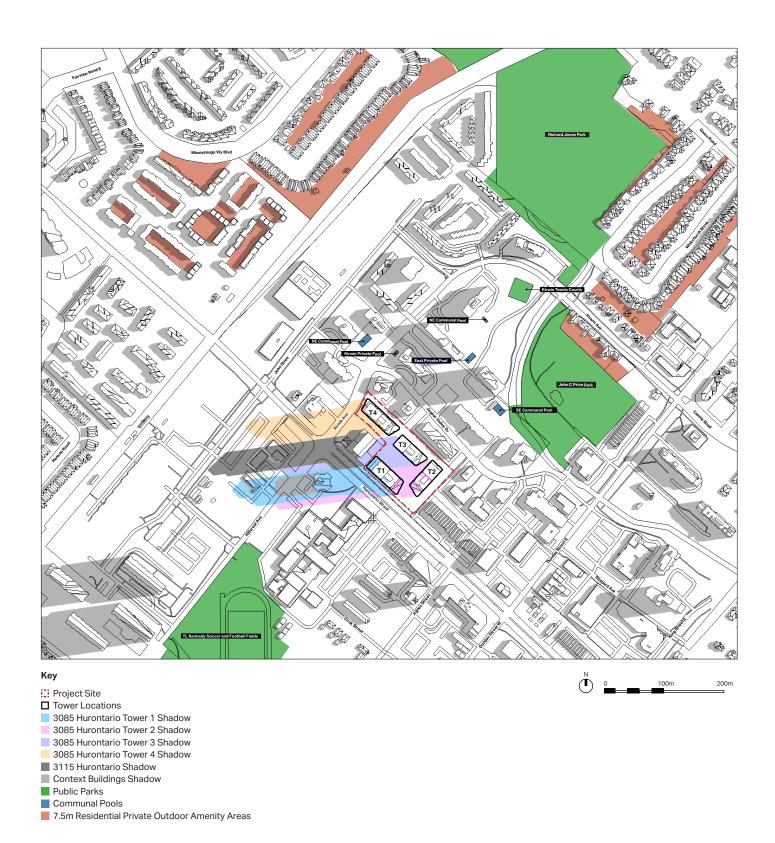
7.5m Residential Private Outdoor Amenity Areas

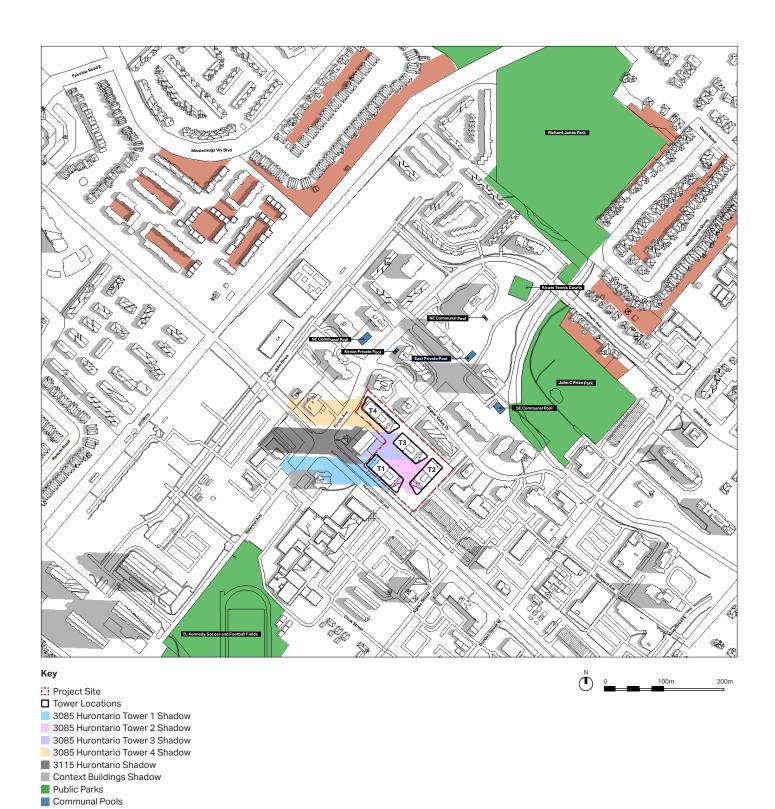
Public Parks
Communal Pools

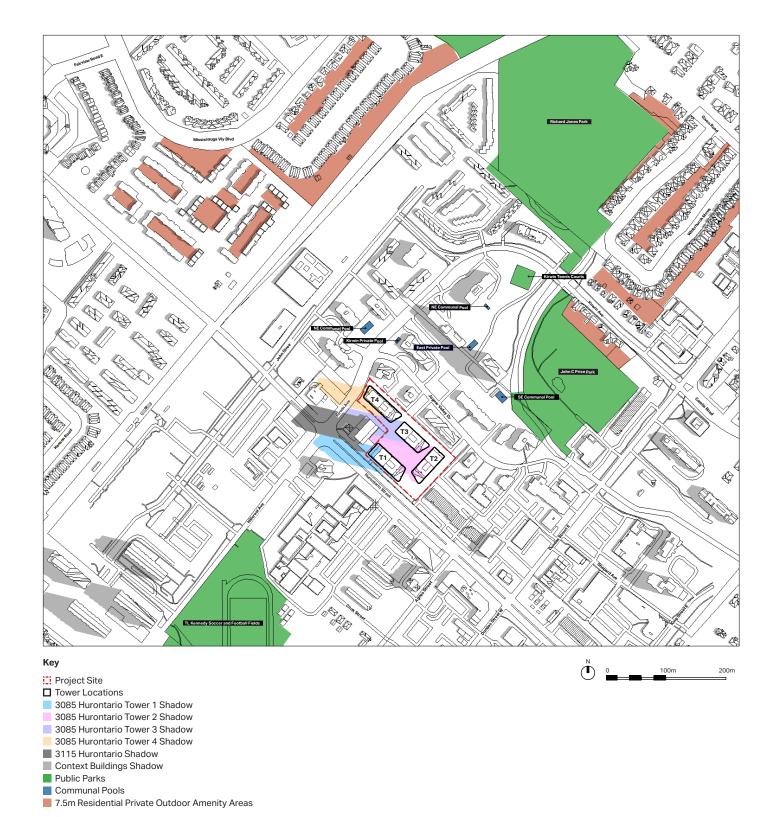






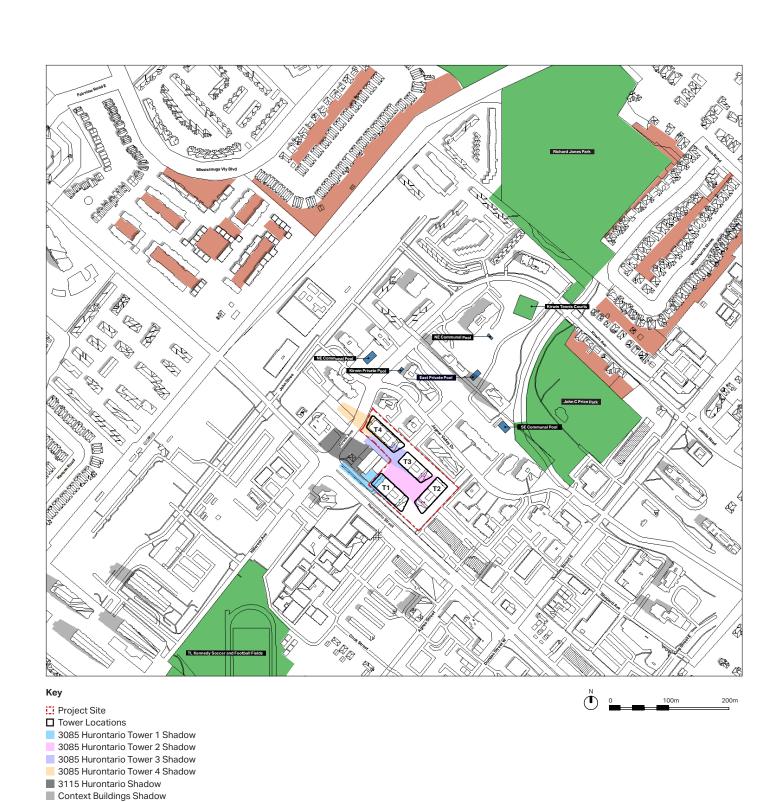


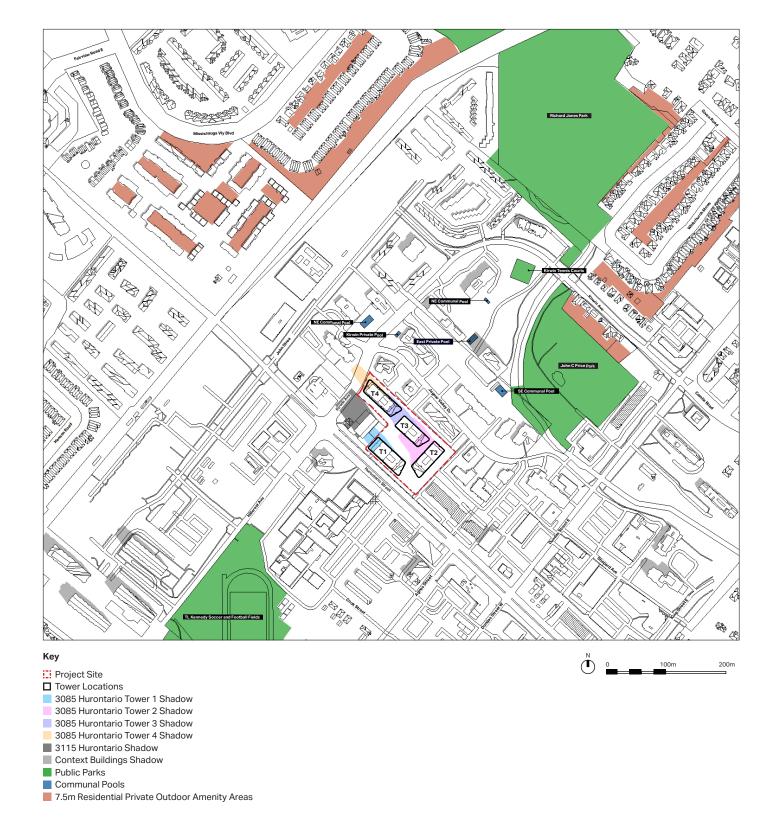


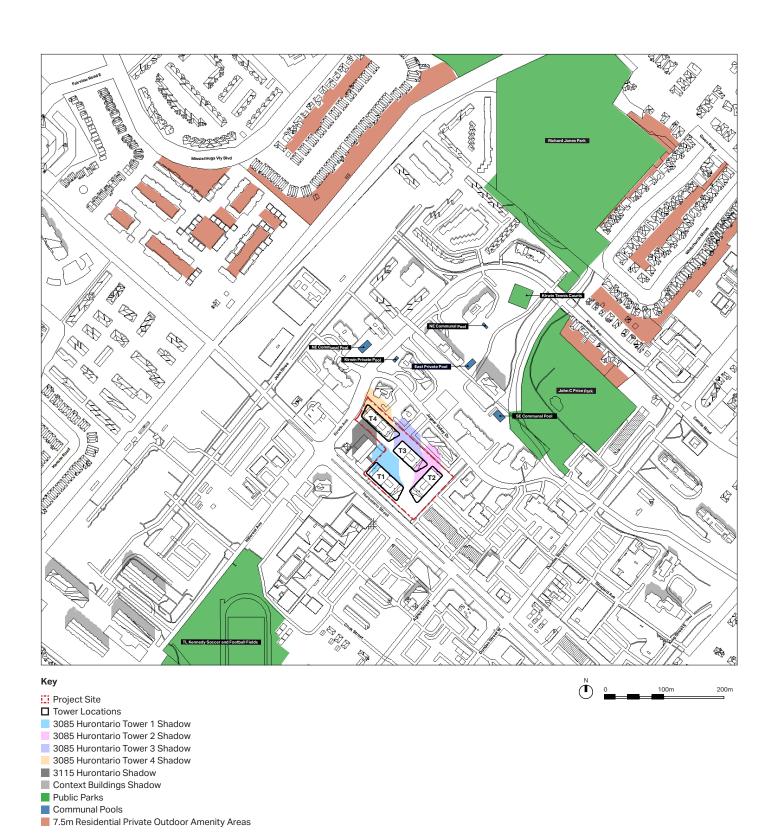


11:20 AM

Public Parks
Communal Pools

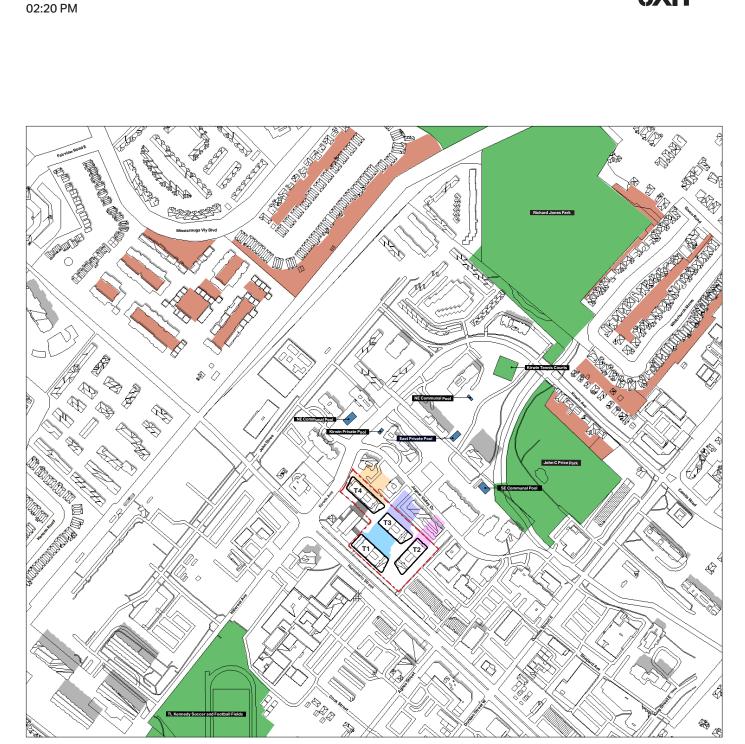


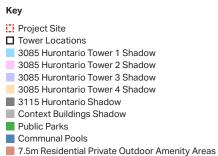


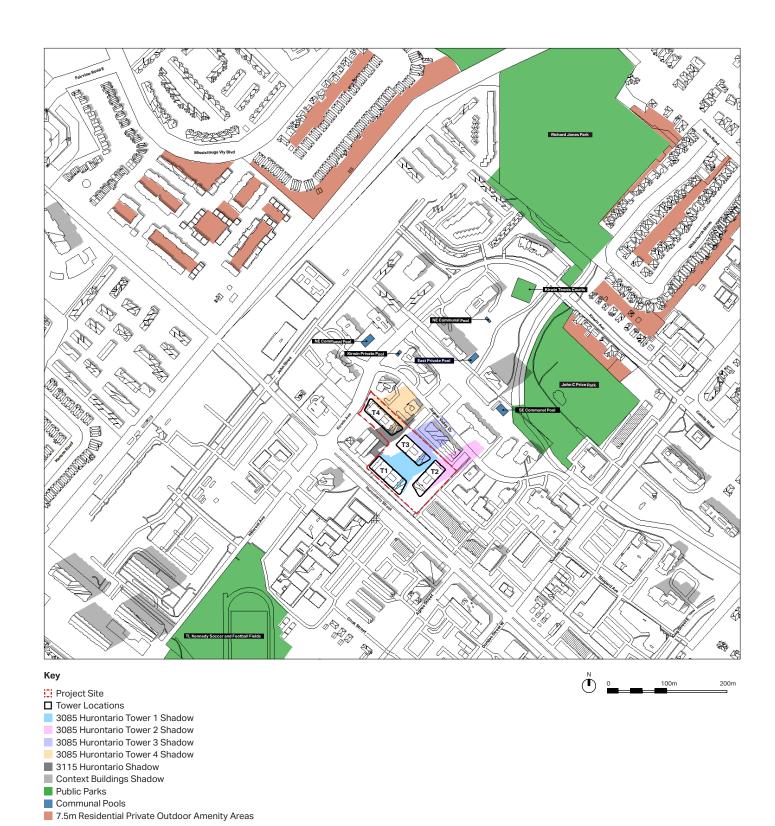


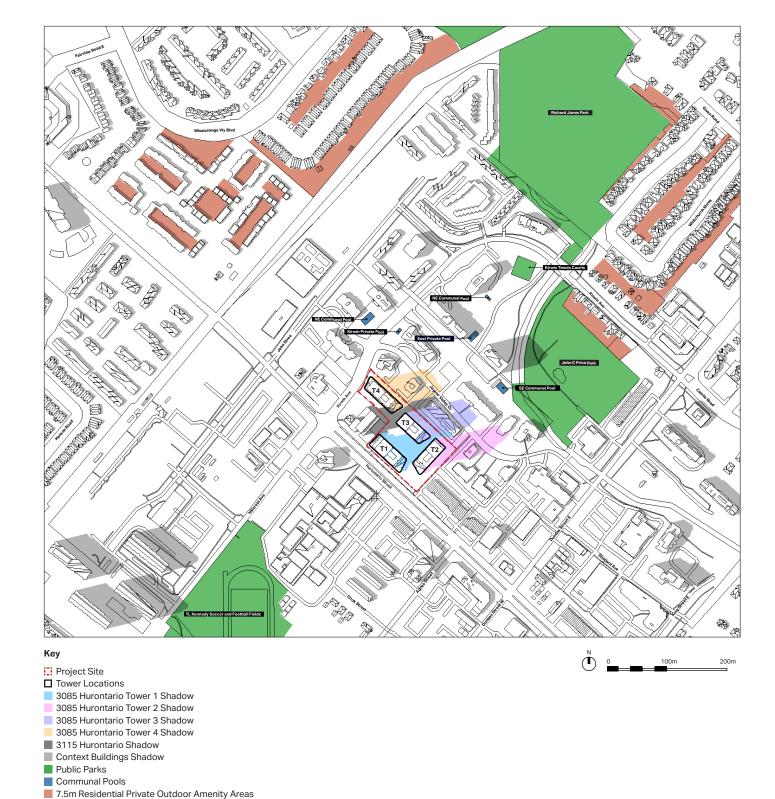
100m

200m

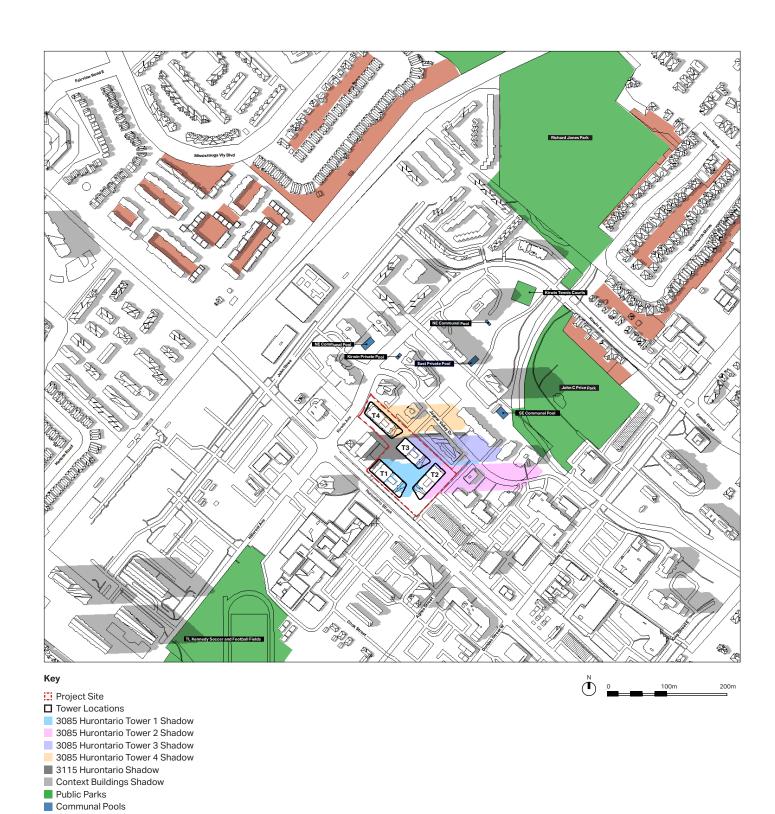


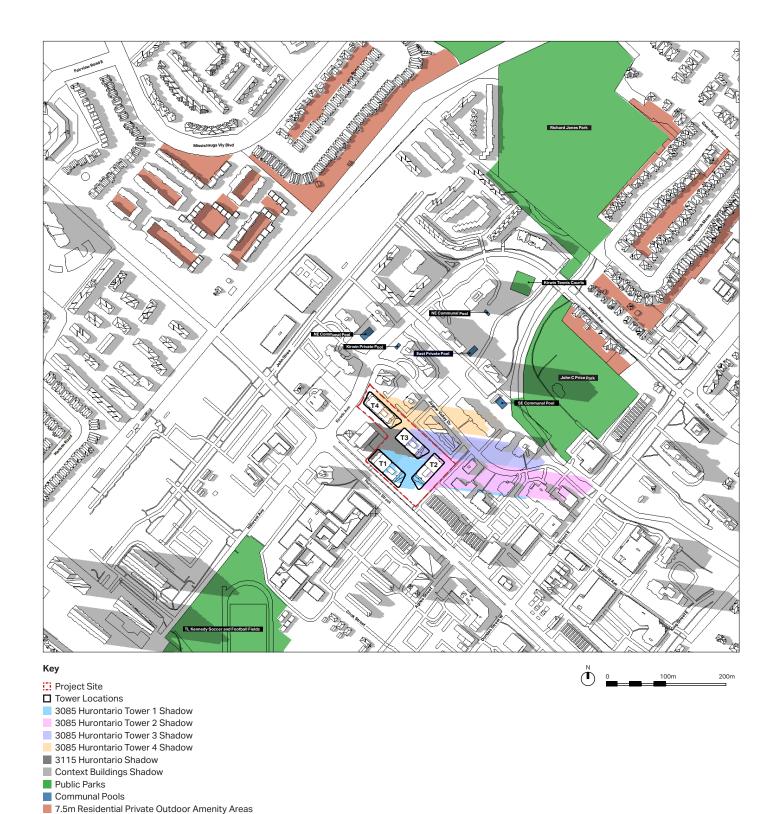


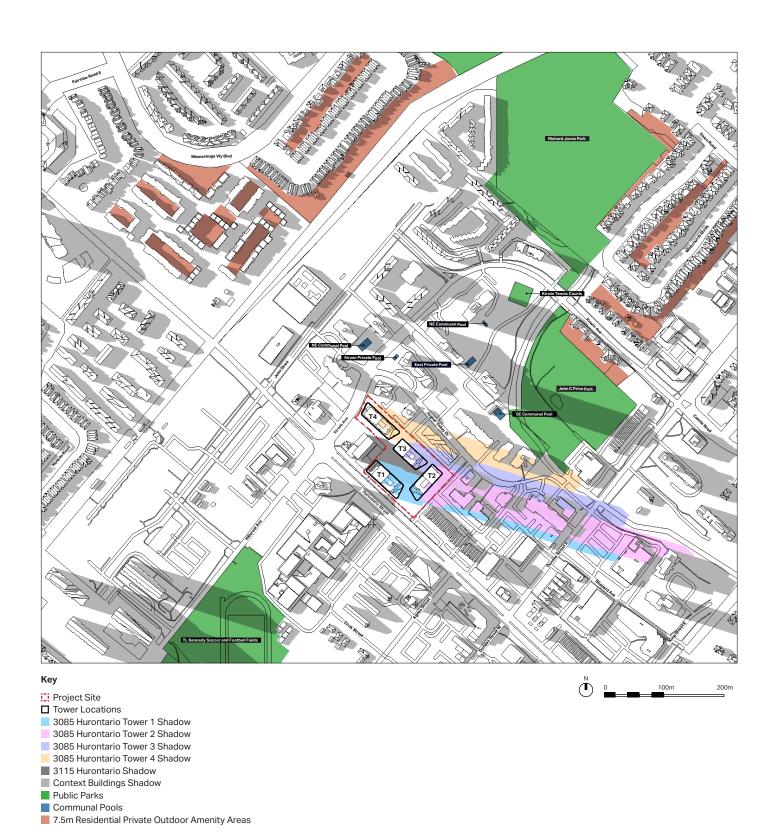




7.5m Residential Private Outdoor Amenity Areas









Context Buildings Shadow

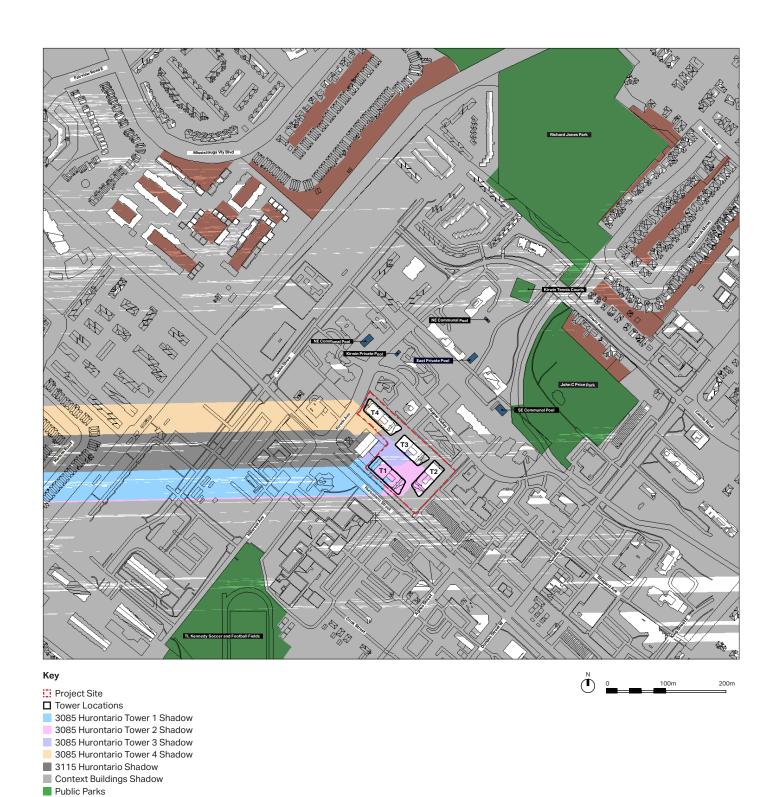
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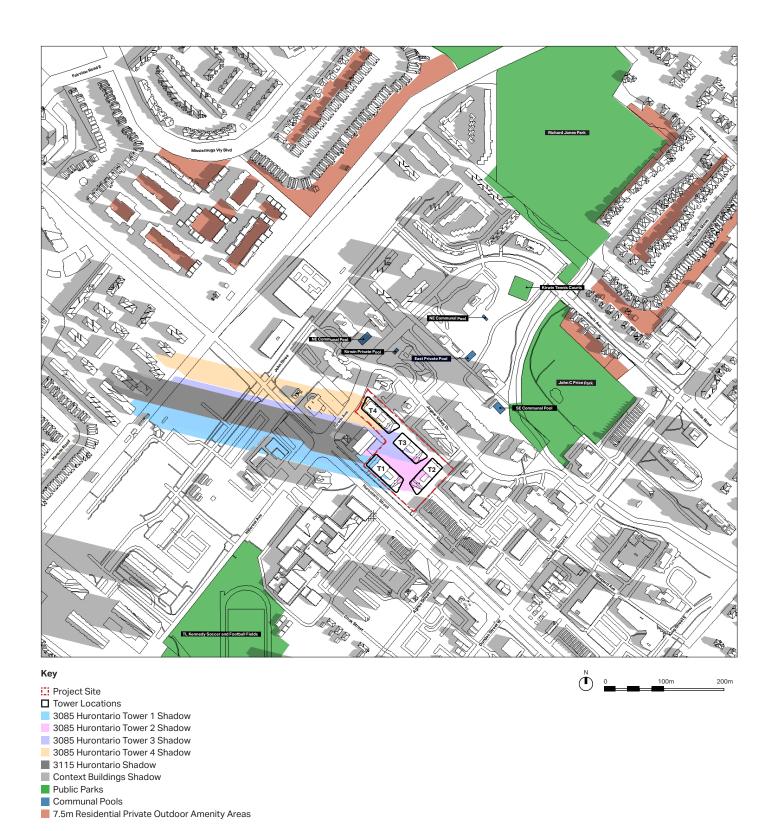
Public Parks
Communal Pools

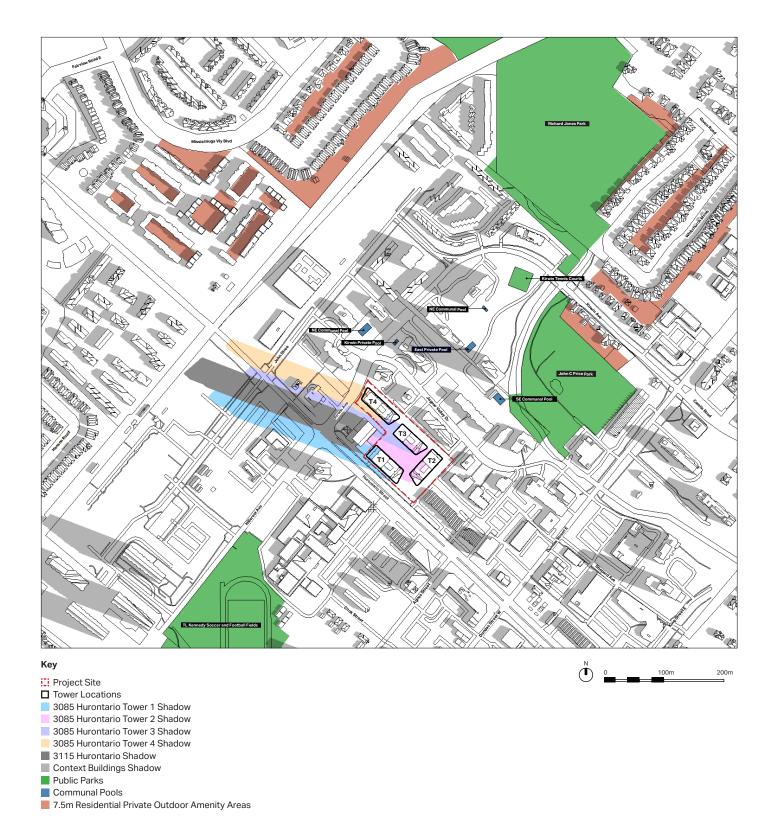


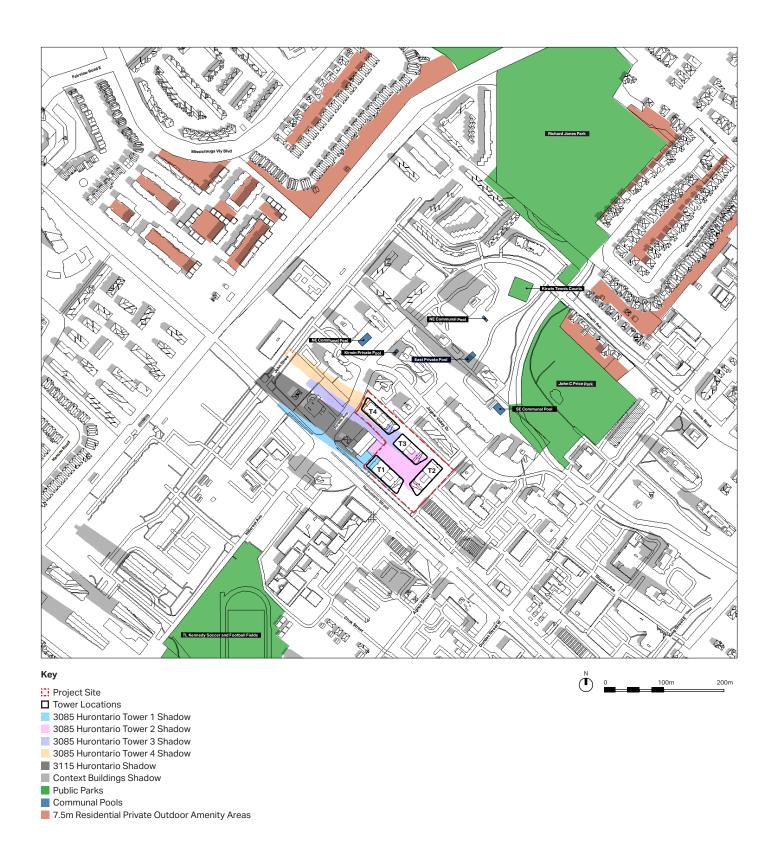
September 21st

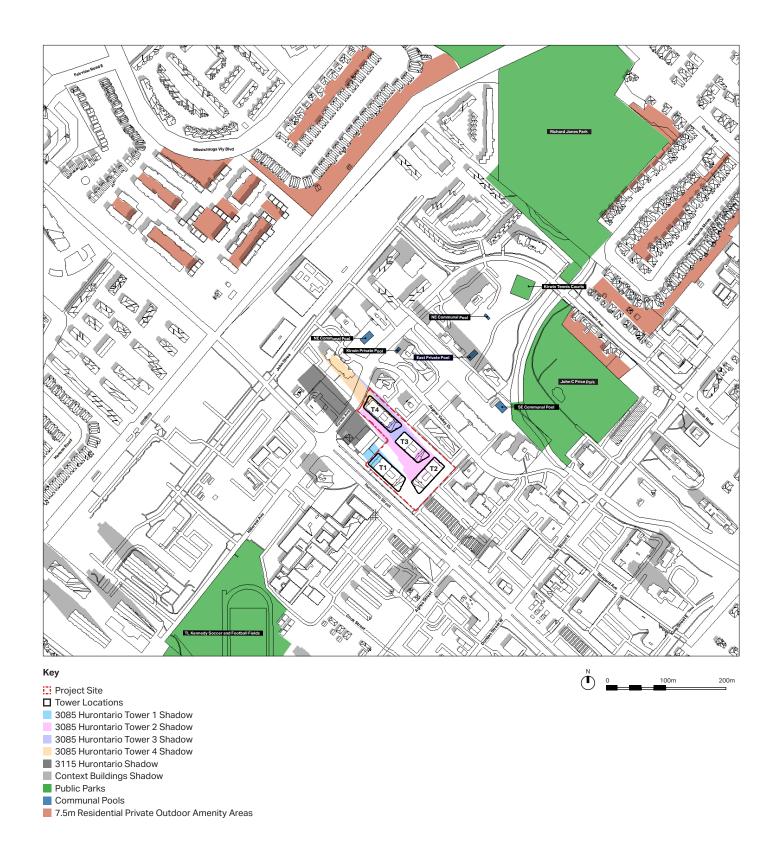
Communal Pools

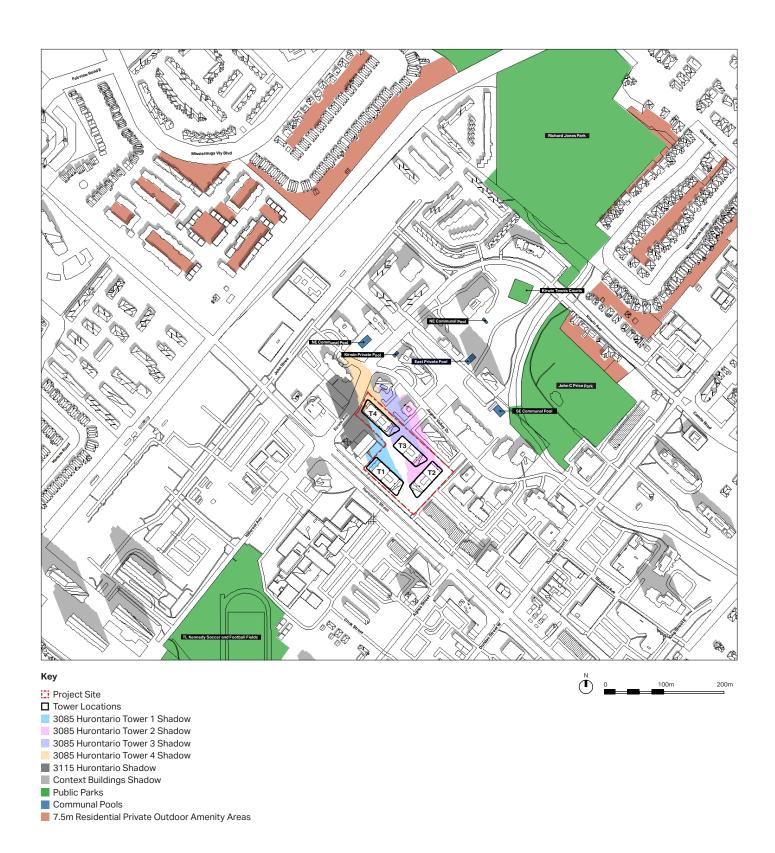


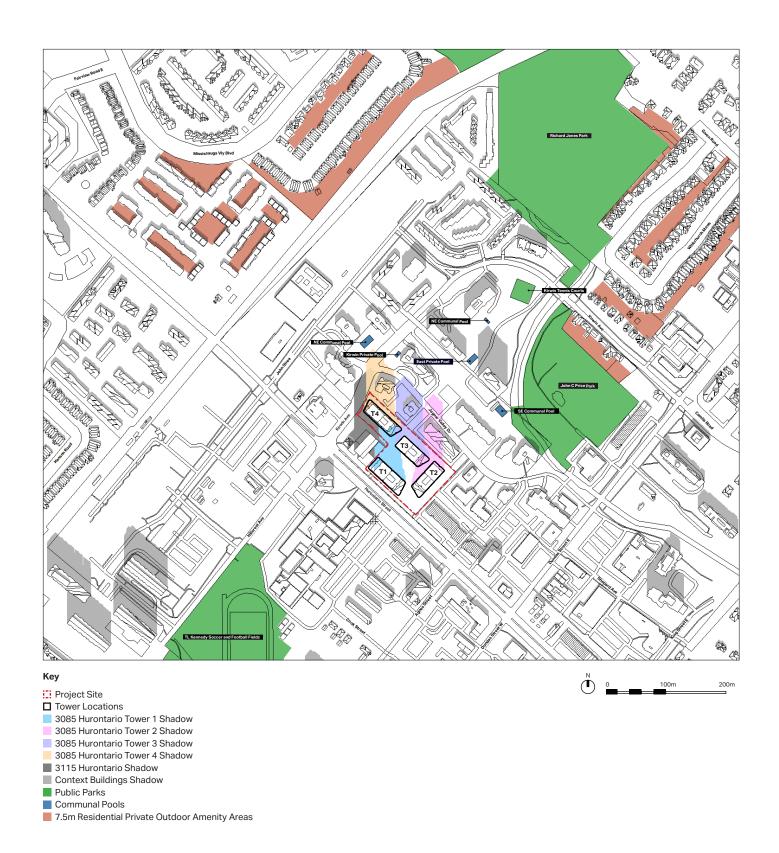


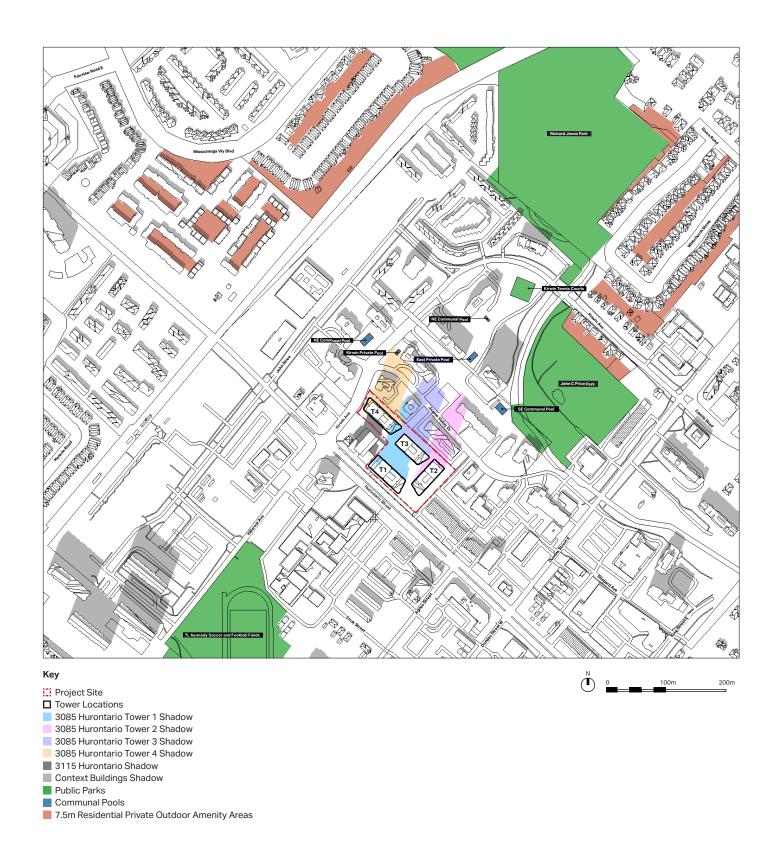


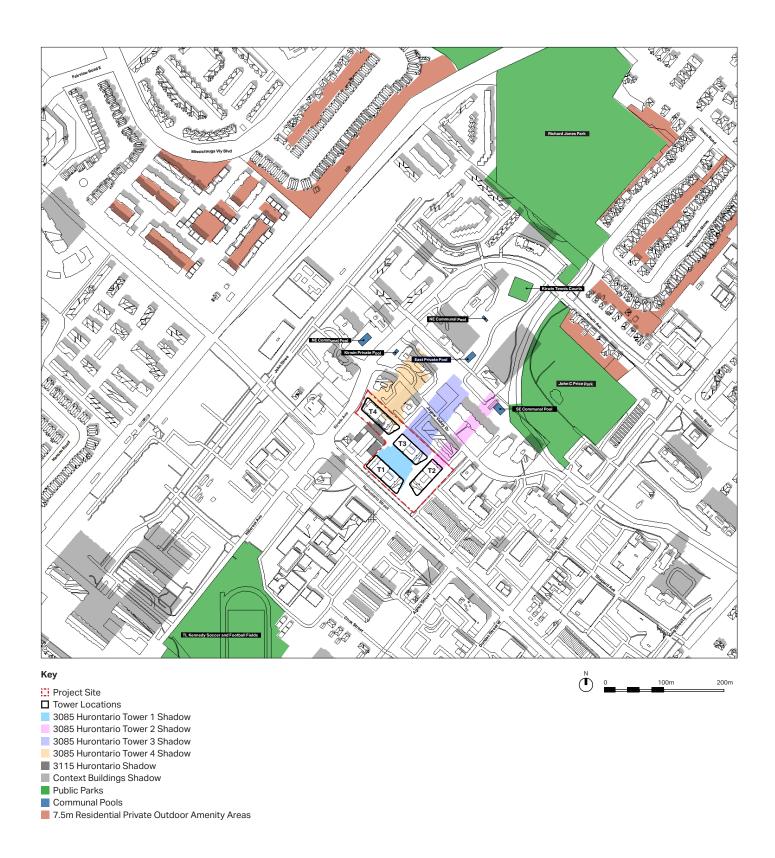


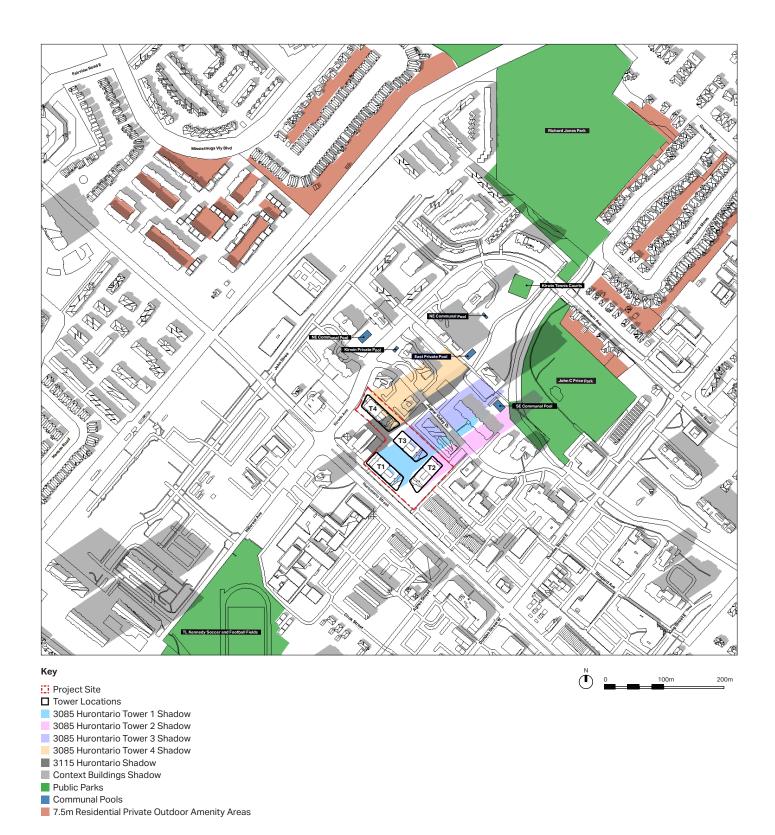


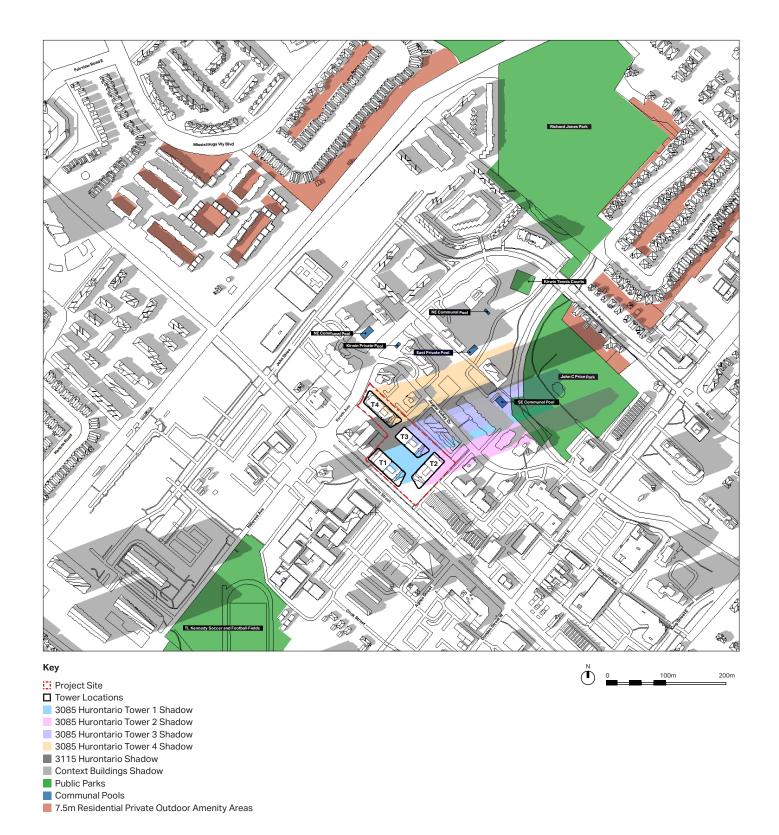


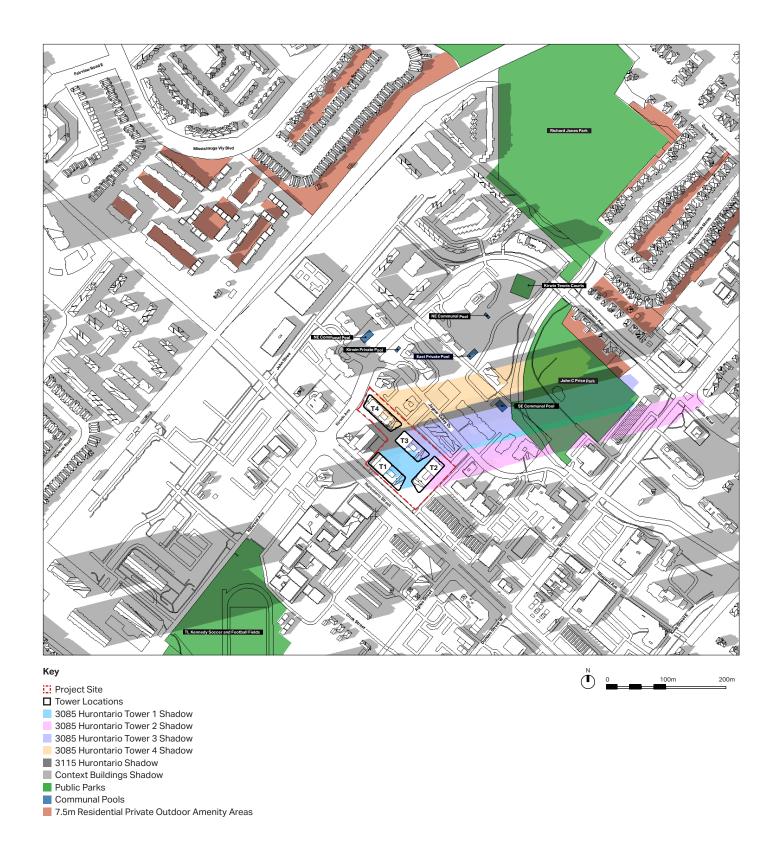












3085 Hurontario Tower 4 Shadow3115 Hurontario ShadowContext Buildings Shadow

7.5m Residential Private Outdoor Amenity Areas

Public Parks
Communal Pools



December 21st





