



# VILLIERS ISLAND PRECINCT PLAN

SAC/ LUAC Meeting: March 29<sup>th</sup>, 2017



# Today's Agenda

Introduction and Update: Recap what we heard Nov. 2015

Villiers Island Vision

Built Form Approach

Sustainability and Climate Positive Design

A Walk Through the Island - Character Areas

Discussion

Next Steps

# SAC, LUAC and Public and Design Review Feedback

What we Heard: Draft Plan November 2015

Support for overall vision, grid pattern, park space and character areas and heritage approach

Suggested refinements:

- Enhance connections from the island to rest of the Port Lands
- Ensure sufficient population density and distribution of uses and activity to animate the public realm
- Introduce more diversity to the built form and massing approach – concern about the line of tall buildings along Commissioners Street and views to the water
- Support for Centre Street as special shared street, but consider uses and built form approach
- Interest in focus on industrial heritage along Keating Promenade
- Need to push sustainability
- Industry concerns about locating high density mixed-use residential buildings across from Lafarge's property

# Plan Refinements

From November 2015 to Today

- Overall vision, approach to heritage, mix of uses, density and street and block network is consistent
- Revised built form approach and tower locations, with consideration for sun shadow, wind, views, passive solar gain and broader directions in Port Lands Planning Framework
- Sustainability first approach with focus on climate positive precinct plan design
- Greater emphasis on Villiers Street and Keating Promenade as the central "living room", embracing Keating Channel and Villiers Street as highly animated, vibrant and distinct places and destinations on the island

Waterfront Toronto has a mandate to deliver **precedent-setting, dynamic, mixed-use neighbourhoods** that raise the bar on sustainability, inclusivity, urban design and innovation.



Waterfront Toronto is now compelled **to do more** to help address pressing challenges that Toronto and cities around the world face:



Climate Positive



Inclusive  
communities



Jobs & Prosperity

# The Vision for Villiers Island

The Villiers Island Precinct area will be transformed into a remarkable new community located at the intersection of the re-naturalized mouth of the Don River, the Inner Harbour and the historic Keating Channel.



# The Vision for Villiers Island



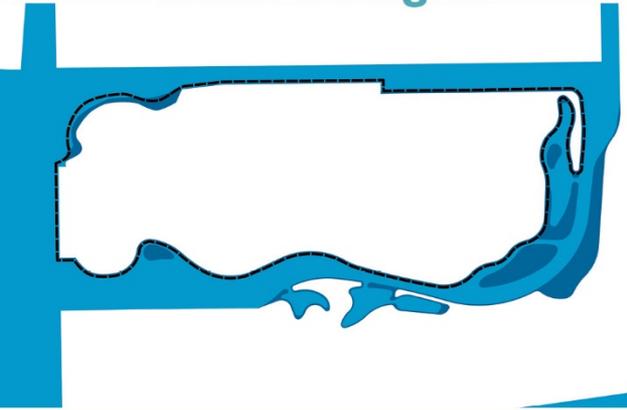
Villiers Island will evolve from an industrial port to a connected and complete island community with great parks and open spaces along four distinct water's edges.

# Precinct Plan Guiding Principles

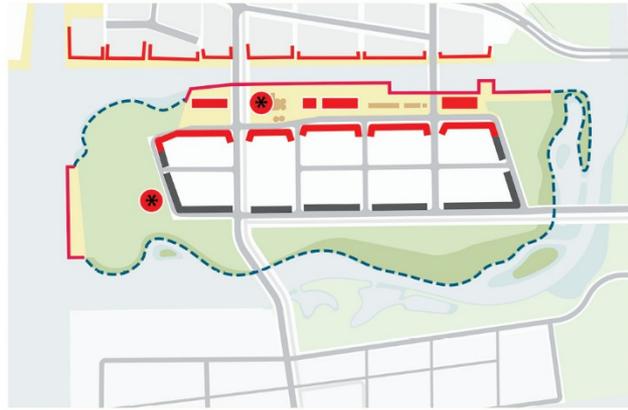
- 01 Animate and **activate the water's edges**
- 02 Create a network of **spectacular open spaces** and waterside parks
- 03 Provide for a catalytic opportunity which **reinforces the Island as a regional destination**
- 04 Reinforce the Island as a **gateway to the Port Lands districts**
- 05 Celebrate the area's **industrial heritage, character and legacy** through appropriate conservation
- 06 **Prioritize transit, pedestrian and cycling** infrastructure to, from and within the Island
- 07 Plan for a **diverse, mixed-use and inclusive community** with a range of affordable and family-oriented housing opportunities
- 08 Provide a **variety of building forms** to support a comfortable and inviting public realm, and establish a distinct skyline
- 09 Develop an innovative model for a **sustainable carbon positive community** and demonstrate excellence in community design
- 10 Ensure that the precinct plan, and supporting infrastructure are **viable and implementable**

# Structuring Moves

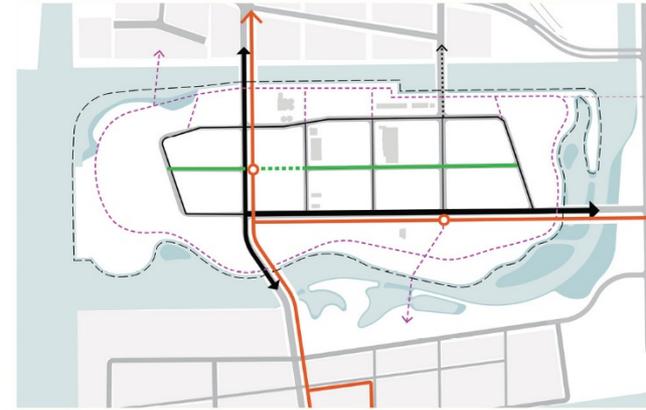
## An Island with Varied Water's Edges



## A Central Living Room



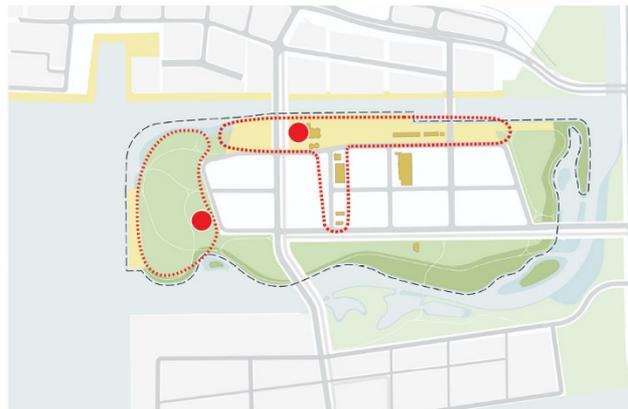
## A Connected Island



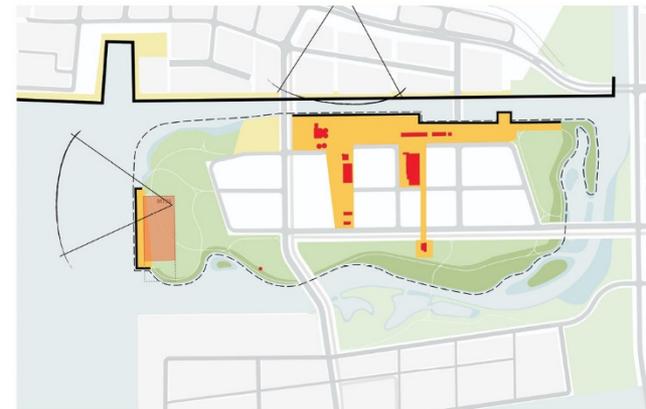
## A Complete Island



## A Destination Island



## An Island with History



# The Precinct Plan

November 2015



# The Precinct Plan

March 2017



# The Precinct Plan

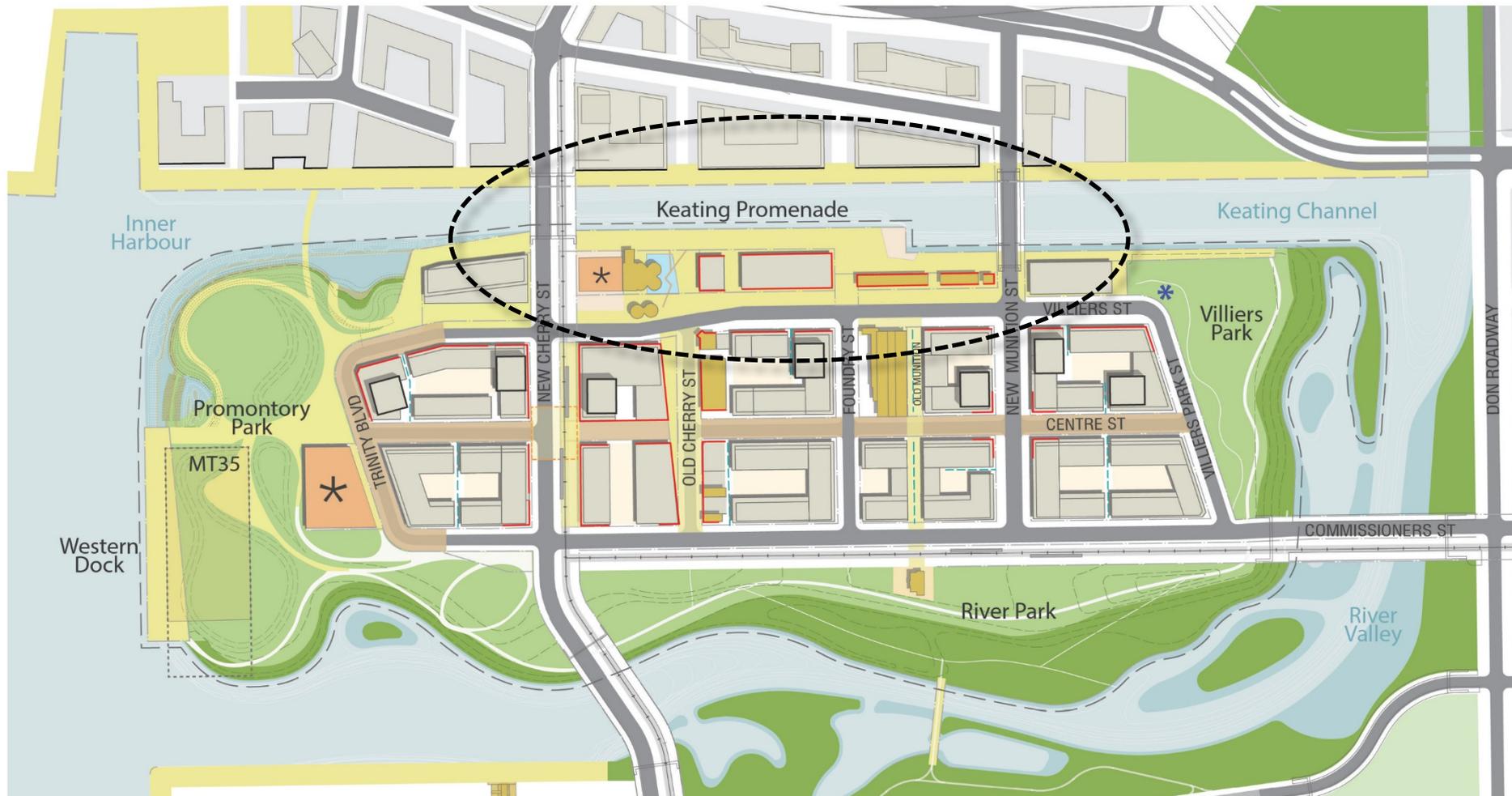
March 2017



- Incorporated grading and landscape design for Promontory Park and river edge
- Shifted Catalytic Use and realigned Trinity Boulevard

# The Precinct Plan

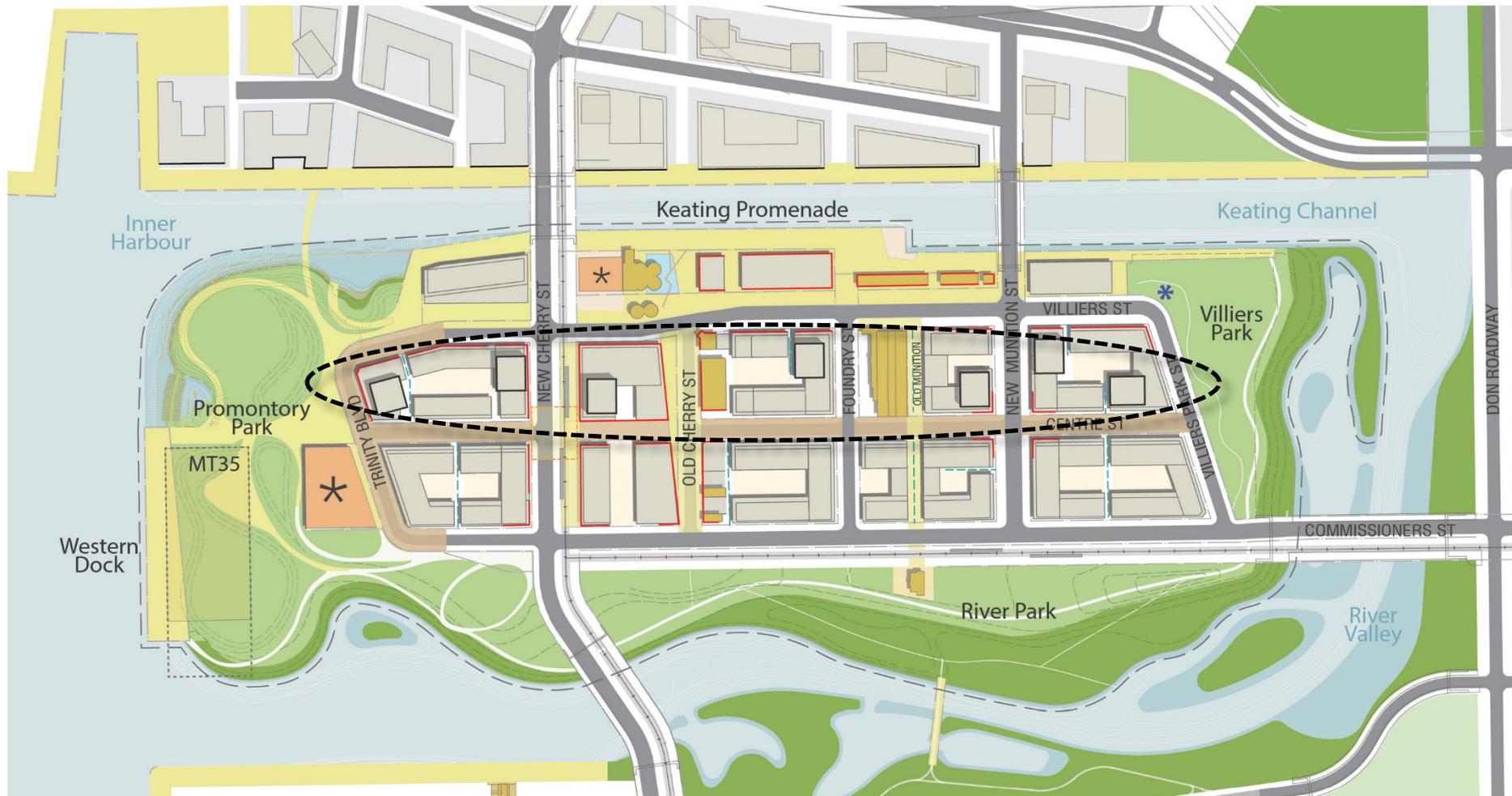
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- Focused activity and amenity along Keating Promenade/Villiers Street as the Island's Living Room
- Framed the Keating Channel as the seam between Villiers Island and Keating Precinct

# The Precinct Plan

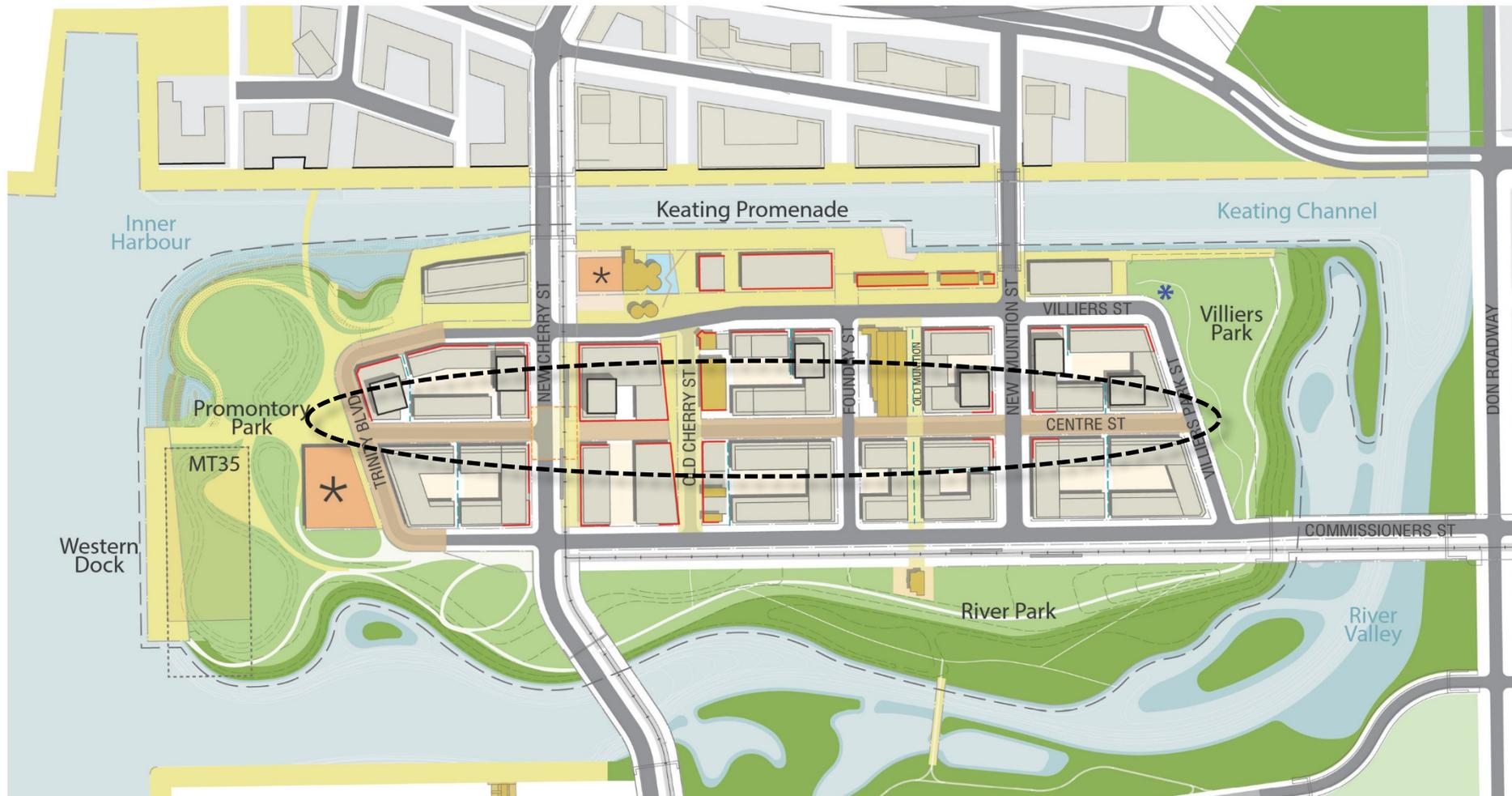
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- Relocated tall buildings relocated in strategic locations north of Centre St
- Introduced generous tall buildings setbacks from both Villiers St and Centre St
- Staggered the tall buildings to avoid “wall “ effect

# The Precinct Plan

March 2017



- Centre Street designed as a residential mews, with active uses at selected intersections
- Mid-rise building stepping back to maximize sunlight on street/pedestrian boulevard

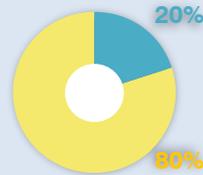
# The Precinct Plan At a Glance

Total Island Area: **33 ha**

Total GFA: **525,700m<sup>2</sup>**

Total Residential GFA: 423,200m<sup>2</sup>

Total Non-Residential GFA: 102,500 m<sup>2</sup>



Average Net FSI: **5.0**



Total # People: **8,270 - 10,700**

Total # Jobs: **2,900**

## Celebrating Heritage

33 Villiers Street/16 Munition Street – **Queen’s City Foundry**

62 Villiers Street – **Toronto Harbour Commission**

275 Cherry Street – **Dominion Bank**

281 Cherry Street – The **Toronto Hydro Substation** building

309 Cherry Street – **William McGill and Company Building**  
and **Bank of Montreal** building

312 Cherry Street - **Century Coal Company** building and **Silos**

39 Commissioners Street – **Ashbridges Bay Fire Hall**

242 Cherry Street – **Marine Terminal 35** and Atlas Crane

The historic **Keating Channel dockwalls**

The **Western Dock**

## Open Space

Total Open Space: **11.2 ha**

**34% of the Island Area**

Promontory Park: 6.4 ha

Villiers Park: 1.2 ha

River Valley Park: 1.7 ha

Keating Promenade: 1.9 ha

## Community Facilities

Community Centre

Elementary School

Daycare

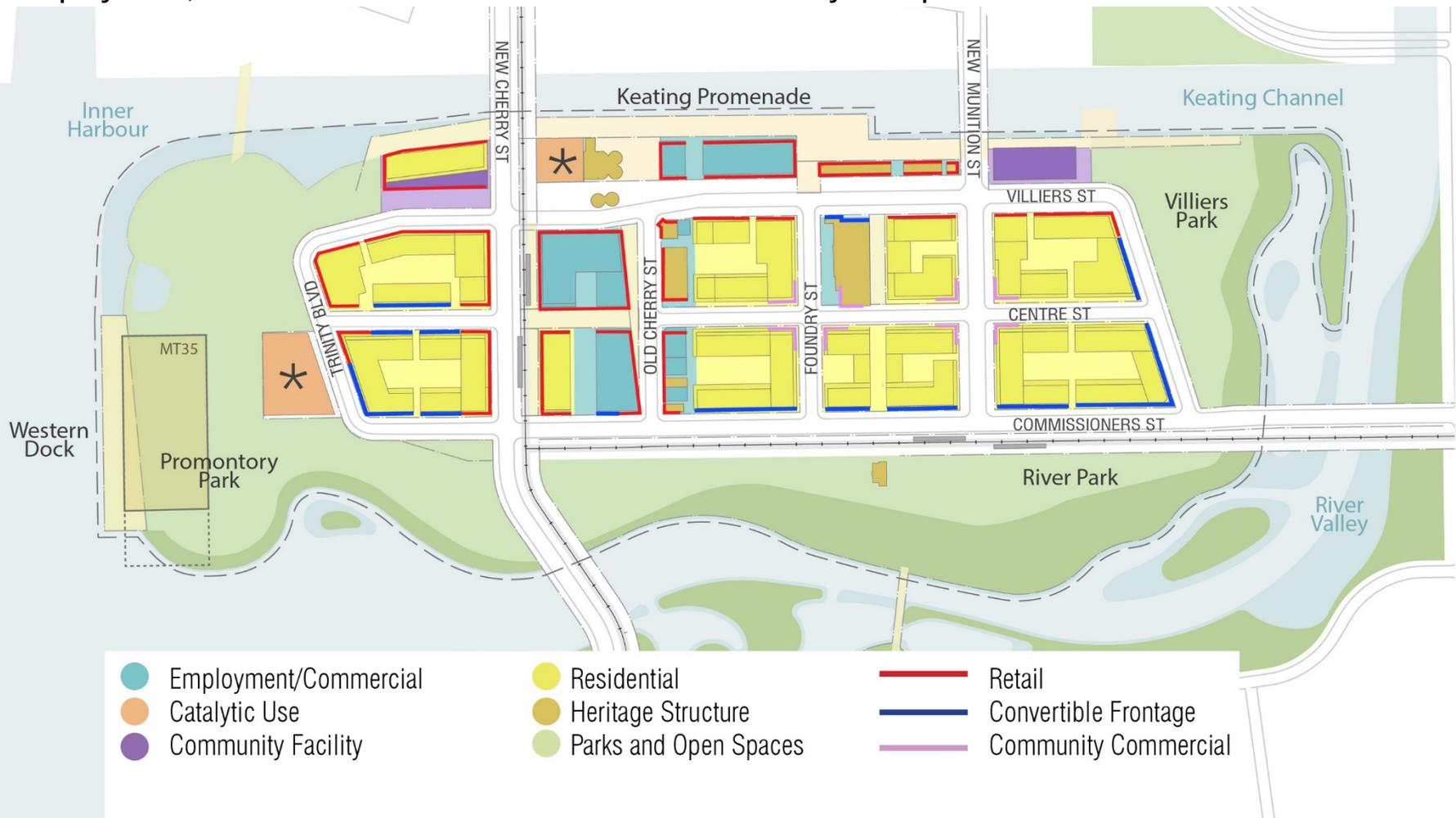
Fire Station

Playground

Multi-Purpose Field

# Land Use & Activity

Villiers Island will become a vibrant mixed-use island on Toronto's waterfront, with a mix of residential uses including affordable and family-oriented options. The Island will also attract retail, employment, recreational and cultural uses to offer a variety of experiences.





# BUILT FORM REVISED APPROACH

# The Precinct Plan

November 2015





# Built Form Principles

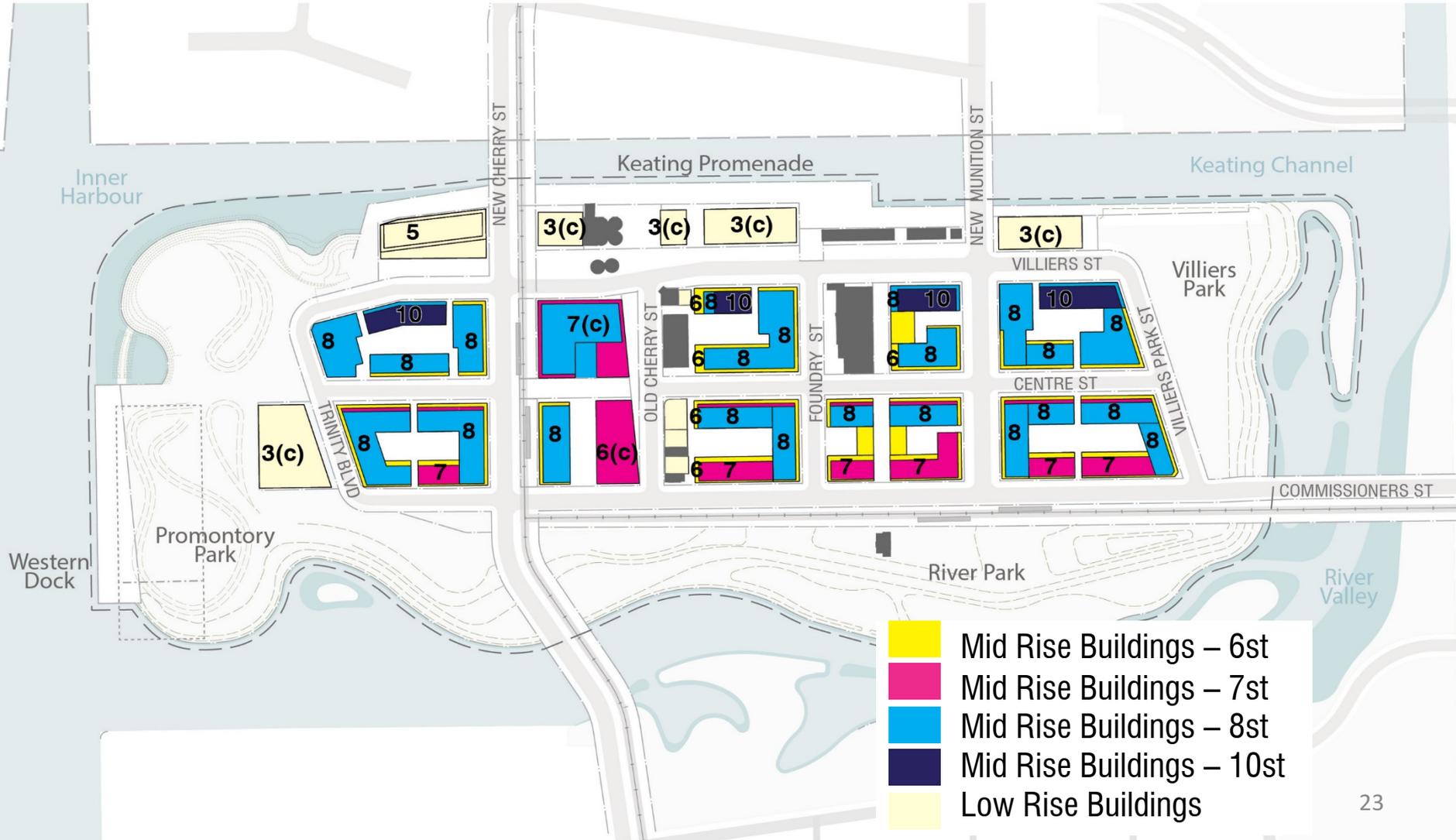
Buildings should generally be developed at **medium scale, with some lower elements and higher buildings at appropriate locations.**”

*CWSP- Policy 2-22 Opening up the Port Lands to Urban Development*

- 01 Create a **varied and dynamic** built form that contributes to the city and Port Lands skyline
  - 02 Reinforce **distinct character areas** and places in the Island
  - 03 Contribute to **spectacular and comfortable all-season** parks, open spaces and destinations
  - 04 Design the built form to **frame and animate** streets, parks and open spaces and respond to water edge conditions
  - 05 Maintain and **celebrate the built, cultural and natural heritage** of the Island and surrounding Port Lands
  - 06 **Showcase views** to the water and industrial landmarks
  - 07 **Position taller buildings** in strategic locations to optimize proximity to transit nodes, define gateways and frame major open spaces
- ★ **(NEW) Leverage passive solar gain** and enable daylighting within buildings and open spaces

# Built Form

## Low & Mid-rise Buildings

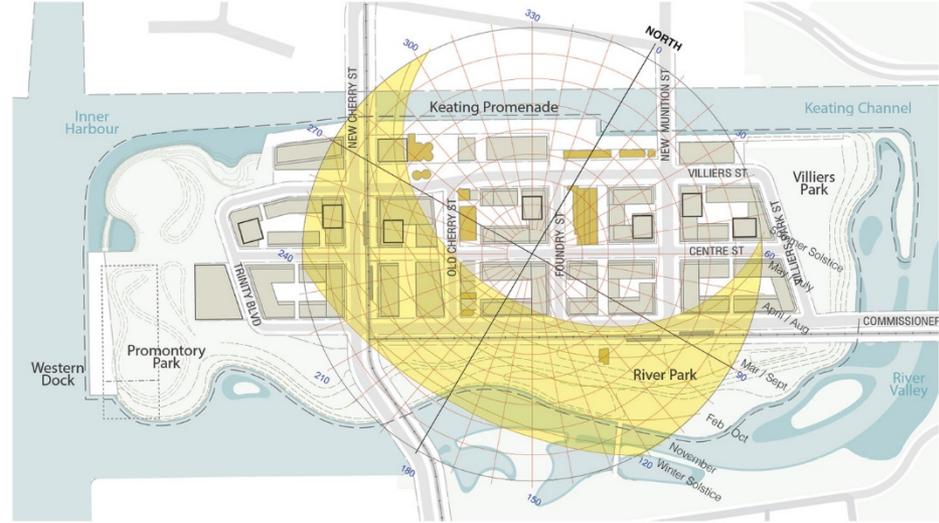


# Built Form Tall Building Considerations

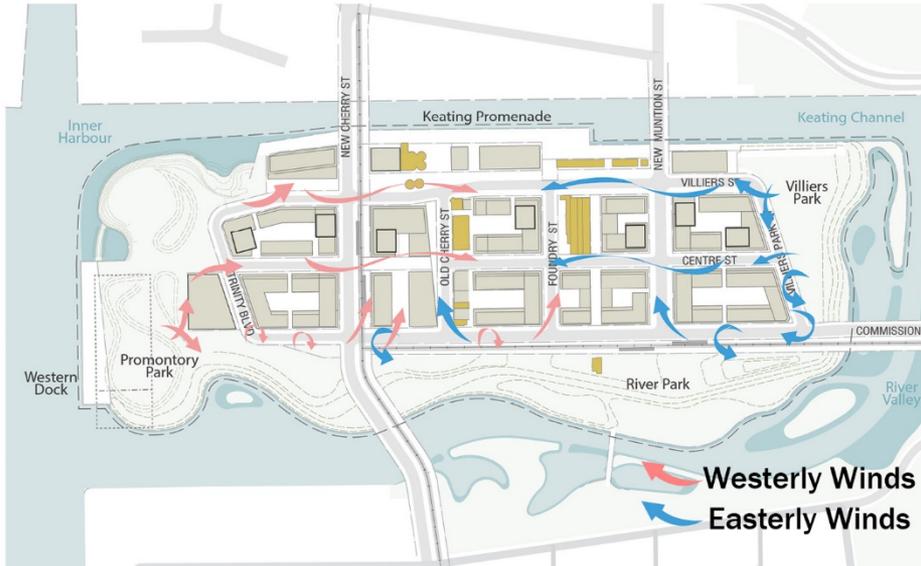
## 1. Maximize sun access on public realm



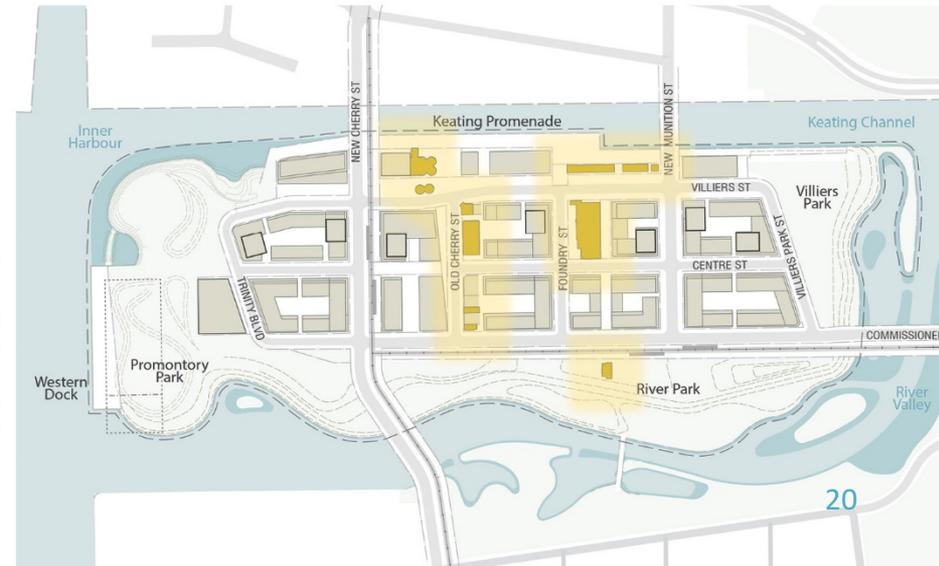
## 2. Leverage solar gain and daylighting



## 3. Mitigate pedestrian wind impact

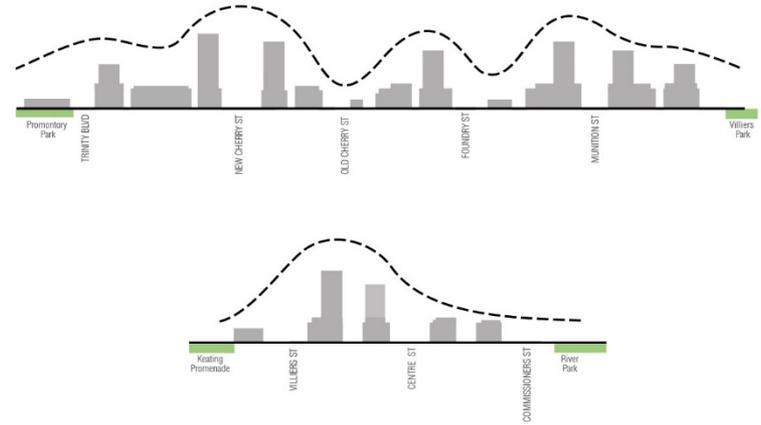
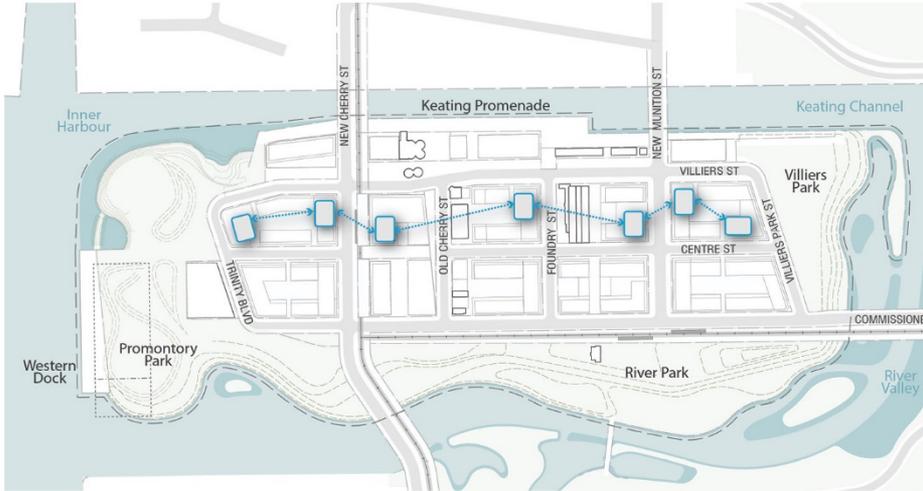


## 4. Provide appropriate transition in scale to heritage buildings

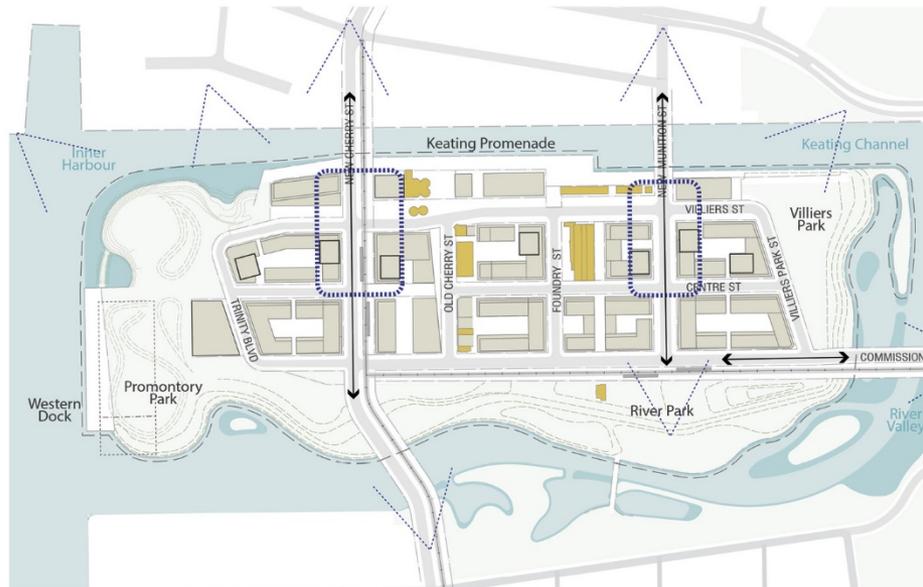


# Built Form Tall Building Considerations

## 5. Distribute towers across precinct



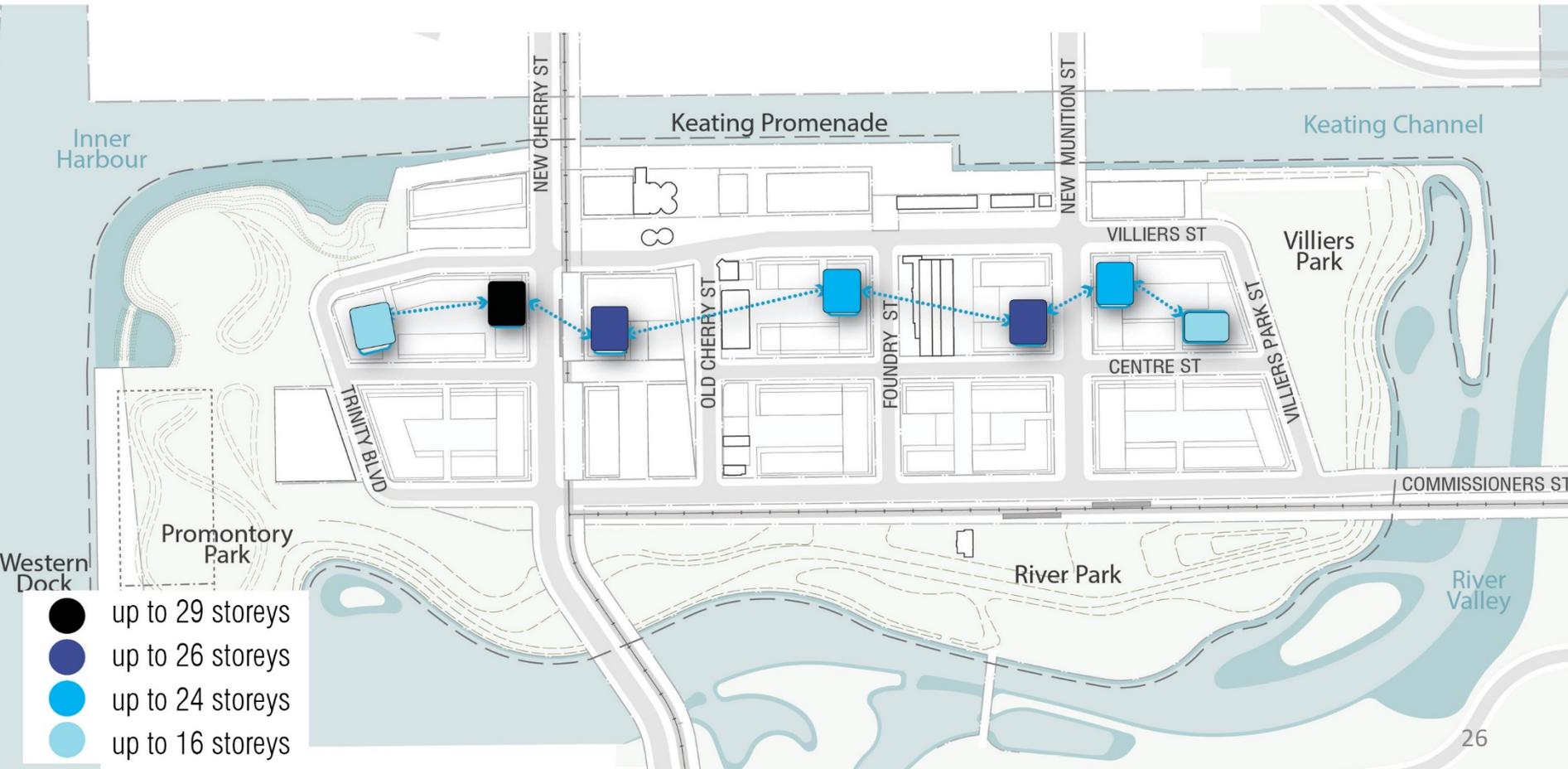
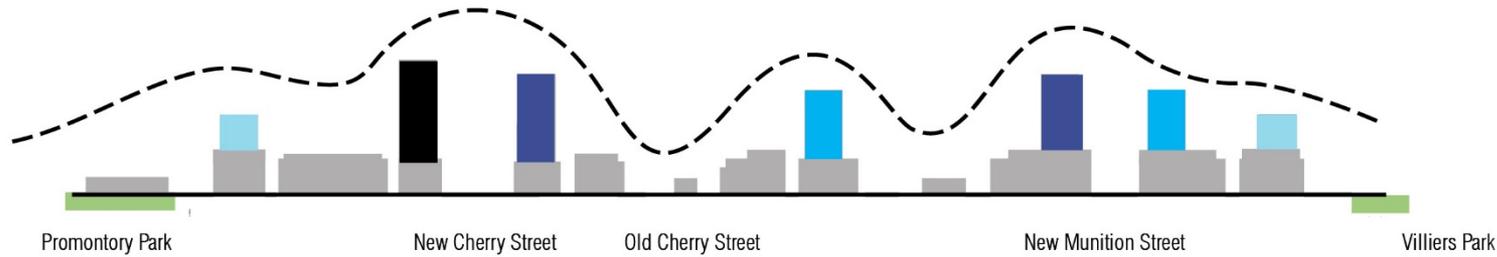
## 6. Define gateways and vistas



## 7. Optimize density in proximity to transit stations



# Built Form Tall Building Heights Strategy



- up to 29 storeys
- up to 26 storeys
- up to 24 storeys
- up to 16 storeys





# TOWARDS A CLIMATE POSITIVE ISLAND

## Focuses on operational emissions

- Thermal and electrical energy use (from buildings, infrastructure and water)
- Waste and wastewater
- Transportation (trips that start or end within site)

## Credits

- Create / preserve parks and green spaces (carbon sinks)
- Reduce emissions in the surrounding community (Export clean / renewal energy)

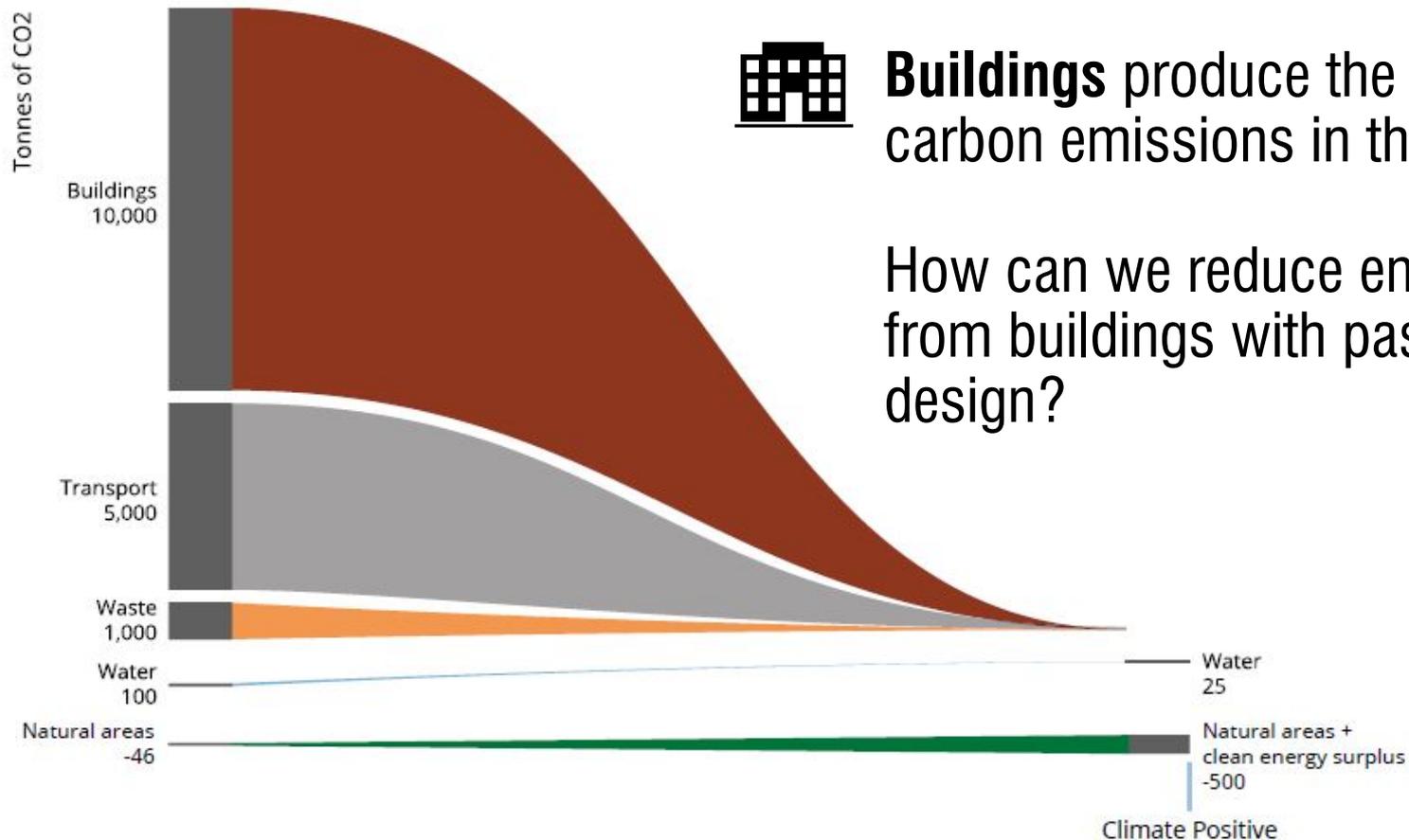
# What is Climate Positive?

- Achieves net-negative greenhouse gas emissions associated with energy, waste and water
- Climate positive outcome is achieved by reducing emissions on site and offsetting emissions by reducing carbon in the neighbouring community
- A carbon positive community is a **very ambitious** target

# Getting to Climate Positive

How to bring carbon emissions down to zero or near zero?

Emissions Path From Current Precinct Plan to Climate Positive Outcome



Source: Villers Island Climate Positive Assessment Report – SSG, 2016

# Optimization Model

## Community Energy Planning Framework

What are the most cost effective ways to achieve carbon positive outcomes?

Minimized Building Loads				Efficient Building Operations		Power Production
Context	Urban Structure	Urban Morphology	Building Typology	Optimized Operations & Appliances	Occupant Behaviour	Renewable Energy
Climate Topography	Configuration Mobility Density	Massing Public space Streetscape	Building type Architecture	HVAC Lighting Hot water Appliances	Lights Room temperature Plug loads Water use	Type Proximity

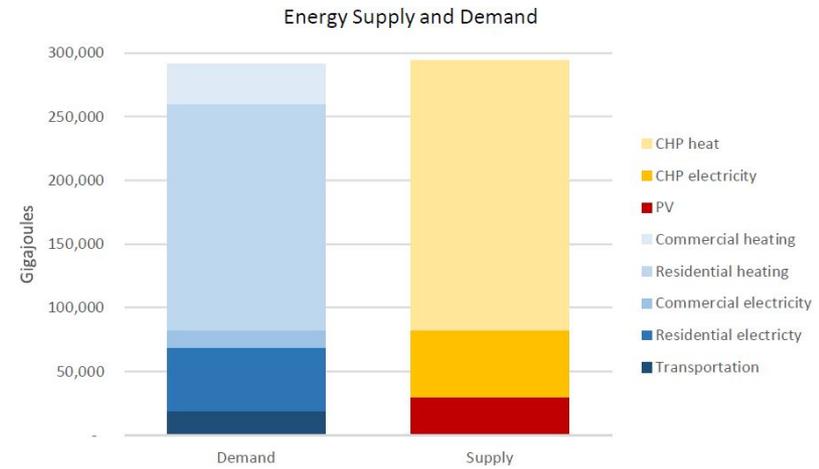
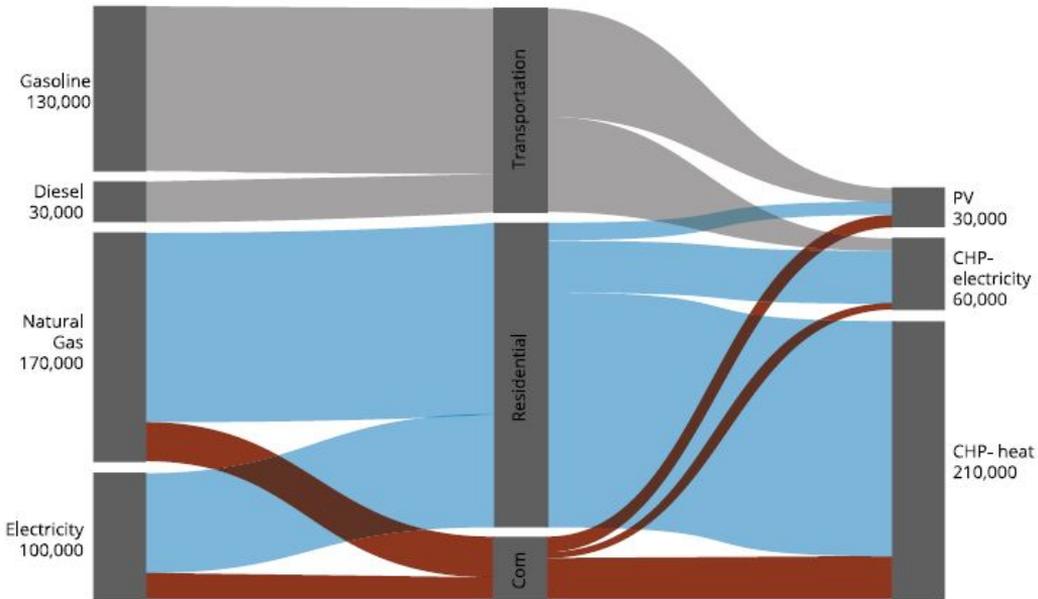

 Increasing Costs

Source: Villers Island Climate Positive Assessment Report – SSG, 2016

# Optimization Model

## Energy Results

Annual energy use drops from 430,000 GJ to 300,000 GJ and shifts to clean energy supply



# Optimization Model

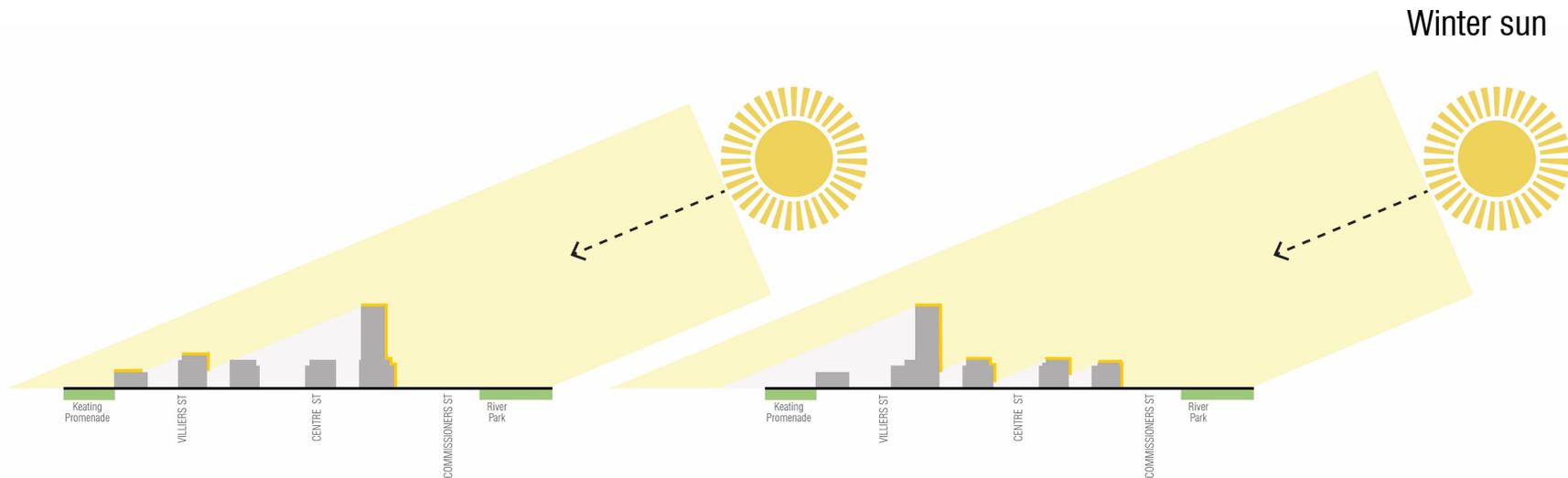
Carbon Reduction to Climate +

GHG Emissions		tCO2	%
<i>Sources</i>	Building heat and power	10,418	63.0%
	Transportation	5,075	30.7%
	Waste	1,036	6.3%
	Water	58	0.4%
	Natural sequestration	-46	-0.3%
<b>Total Emissions based on MGBR</b>		<b>16,541</b>	<b>100%</b>
<i>Reductions</i>	Passive House standard	-7,747	-46.8%
	Vehicle electrification	-4,162	-25.2%
	Mode shift	-254	-1.5%
	CHP system (supply within precinct)	-2,998	-18.1%
	PV	-333	-2.0%
	CHP system (supply beyond precinct)	-1,100	-6.7%
<b>Total Reductions</b>		<b>-53</b>	<b>-100.3%</b>

# Towards Climate Positive with Building Design

## Passive Design

Solar modelling analysis indicates that locating taller elements on north end of Island leverage solar gain, reduces energy demands and will contribute to climate positive development



Tall elements on the south end of the island along Commissioners as per November 2015 Plan

Tall elements on the north of the island

# Towards Climate Positive Passive Design

- Passive solar design uses the sun's energy for heating and cooling
- Buildings take advantage of natural energy from exposure to the sun
- The sun's energy is free
- Design of buildings incorporate energy efficient considerations including high-performance building envelopes, air sealing tightness, thermal mass, shade devices, natural ventilation, daylighting, passive solar heating

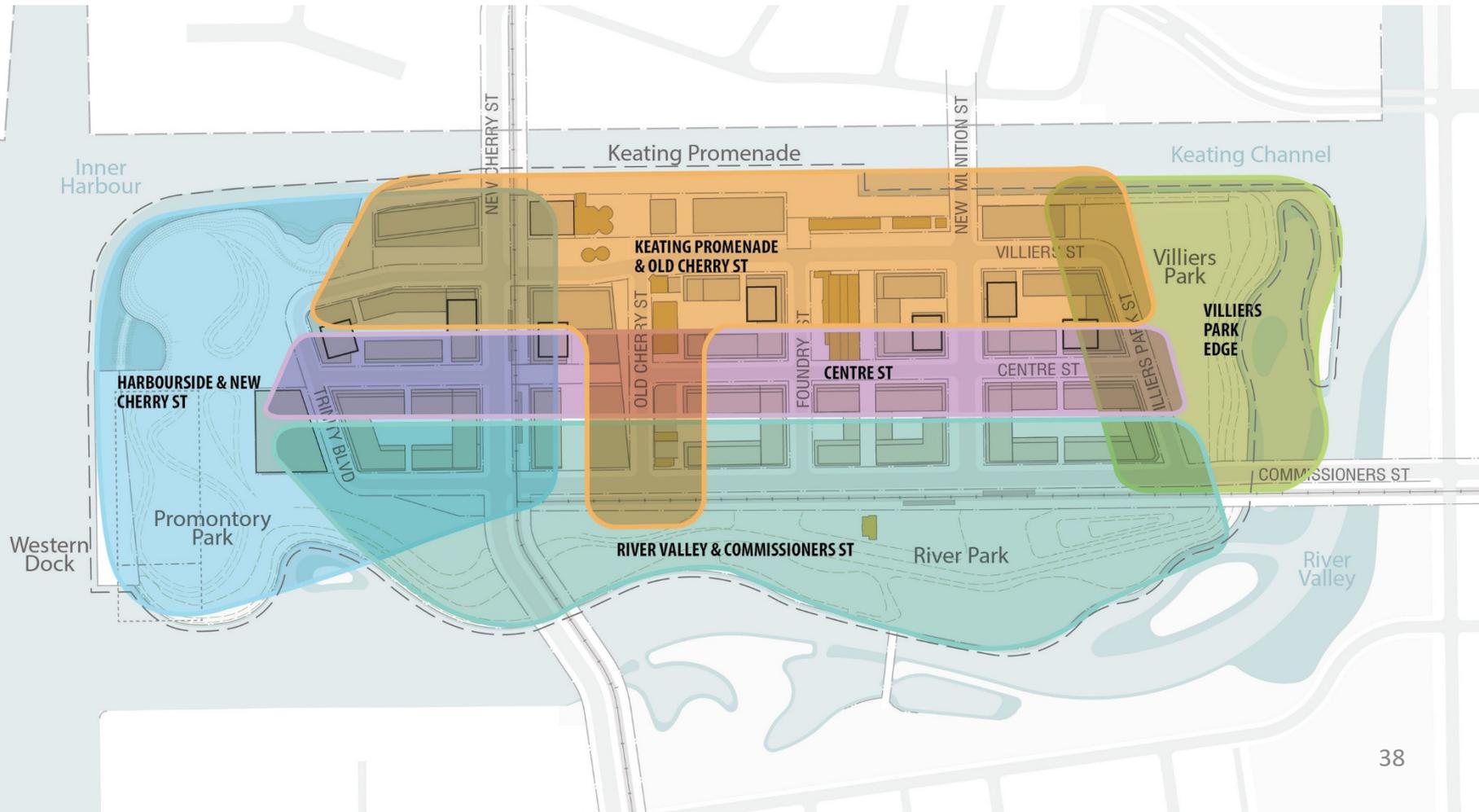


# A WALK THROUGH THE ISLAND: CHARACTER AREAS

# Character Area & Sense of Place

5 character areas create a distinct sense of place on the island

Character areas include design directions for public realm and built form, and consist of special place-making features



# Harbourside & New Cherry Street

Harbourside will mark the western end of the Island, and will become a lively and active mixed-use waterfront destination, anchored by Promontory Park and the Catalytic Use.



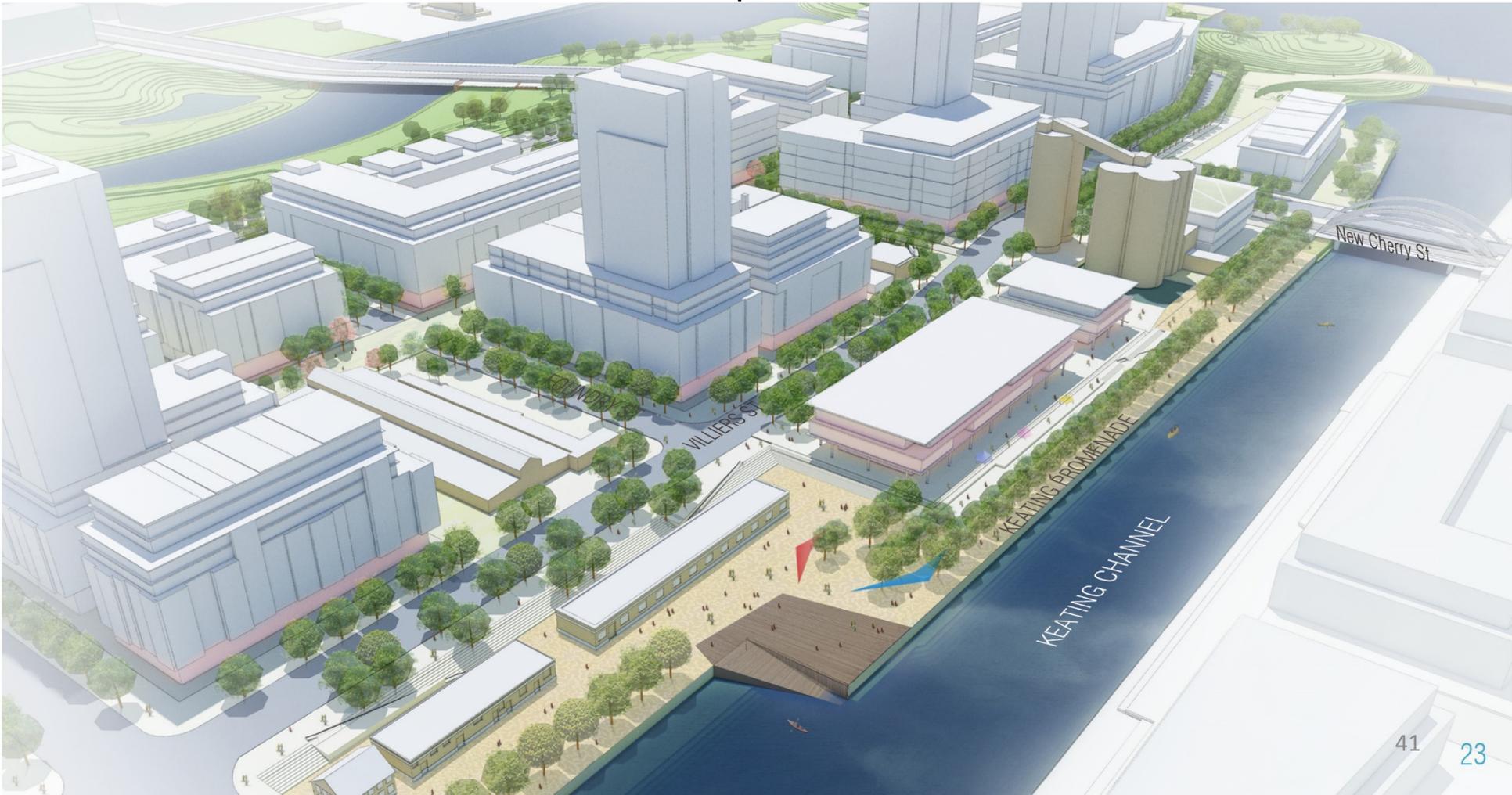
# Harbourside & New Cherry Street

New Cherry Street will form the main gateway and point of arrival to the Island, with dedicated transit, bike lanes and a wide public boulevard. This street will be lined with mixed-use buildings and become a focus for commercial and employment related activities.



# Keating Promenade & Old Cherry Street

The Keating Promenade's canal frontage will be transformed into the Island's most distinctive urban gathering space. It will be lined with low-rise, pavilion style buildings and the restored Harbour Commissioner buildings. This edge will feature a generous and varied public realm, with waterside cafes, restaurants and small shops.



# Keating Promenade & Old Cherry St.

Old Cherry Street will be celebrated as a cohesive heritage cluster at the heart of the Island, marked by the iconic Silos Square, repurposed commercial heritage buildings, with sensitive low-rise infill development on the east side and mid-rise buildings on the west side.



# River Park & Commissioners Street

Commissioners Street will be a complete transit-oriented street, framed by a strong pedestrian-scale building edge facing River Park. This naturalized edge of the Island will provide opportunities for walking and cycling with connections to a network of trails.



# Centre Street

Centre Street will become a special pedestrian district, connecting the Catalytic Use and Promontory Park to Villiers Park. This distinct shared street will create an appealing walking environment at the heart of the island.



# Villiers Park Edge

Villiers Park will become a local community hub with elementary school and outdoor active recreational space. Residential development will frame the park and animate this edge.



# Next Steps

- Present to Design Review Panel in April
- Refine and finalize Precinct Plan
- Port Lands Planning Framework Official Plan Amendment provide policy direction to guide Villiers Island
- Take Precinct Plan to Council for endorsement, Fall 2017

# Discussion



