

Port Lands Flood Protection & Enabling Infrastructure Project Update – Toronto RAP

November 14, 2016









- 1. The Port Lands
- 2. Don River Flood Protection
- 3. The Project
- 4. Why Undertake Due Diligence
- 5. High Level Findings
- 6. Project Benefits
- 7. Questions



The Port Lands



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Flood Risk (2010)





Flood Plain (2010)



Remaining Flood Risk





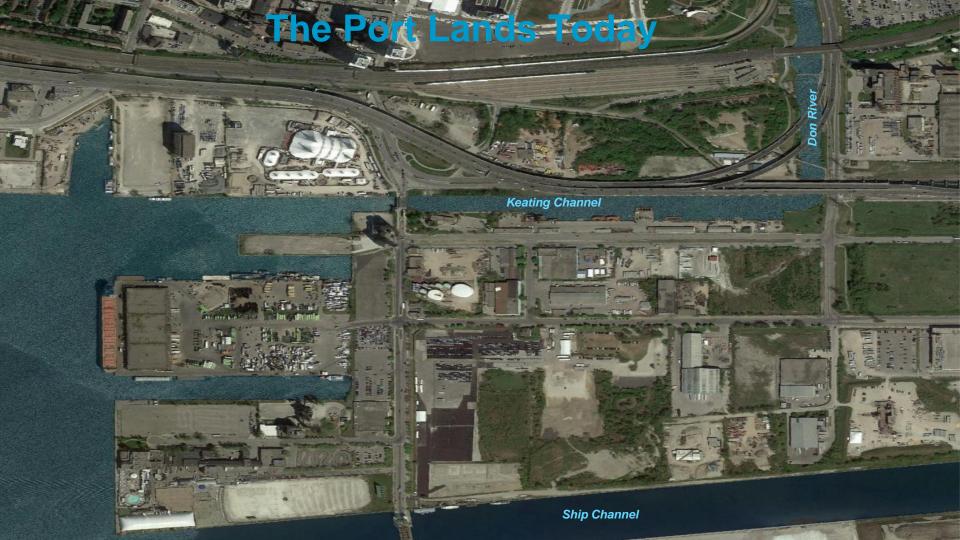
Flood Plain

Flood Protected

Flood Protection Landform & Extended Railway Crossing



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Port Lands Flood Protection Project



Unique and Unprecedented:

- River Mouth concept as flood protection
- No established regulatory approval process for creating a river in brownfield

Port Lands Flood Protection Project



After Flood Protection:

- New Don River mouth
- Don Greenway
- Improved Keating Channel
- Additional Infrastructure to drive development
- Significant sources of contaminated soils and groundwater remediated

A Decade of Planning







October 2015 - Refined Design -Due Diligence

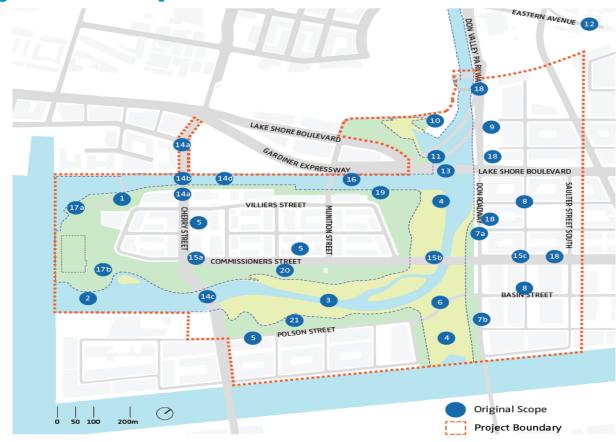


Project Components

Legend

- Essroc Quay Lakefilling
- Polson Slip
 Naturalization
- River Valley System
- Don Greenway
 (Spillway & Wetland)
- 5 Site Wide Muncipal Infrastructure
- Basin Street Bridge
- 7a Don Roadway North
- 7b Don Roadway South
- 8 Don Roadway Valley Wall Feature
- First Gulf/Unilever Site
- Sediment and Debris Management Area
- 11 Flow Control Weirs
- 12 Eastern Ave. Flood Protection
- Lake Shore Road & Rail Bridge Modifications

- Cherry Street
 Re-alignment
- Cherry Street Bridge North
- Cherry Street Bridge
 South
- Old Cherry Street Bridge Demolition
- Commissioners Street
 West to New Cherry Street
- Commissioners Street Bridge
- Commissioners Street
 East to Saulter Street
- 16 Keating Channel Modifications
- Promontory Park
 North
- Promontory Park
 South
- Hydro One Integration
- 19 Villiers Island Grading
- River Park North
- River Park South





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Due Diligence



DMNP EA includes:

- Basic design
- Limited soil and geotechnical info
- Nature of needed infrastructure
- Rough project timeline
- Economic benefits
- Seven-year construction period

Due Diligence explored in greater detail:

- Scope creep
- Risk-based contingency setting
- Increased site characterization (soils/groundwater)

Don Mouth Naturalization and Port Lands Flood Protection Project

March 2014





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Due Diligence – Key Findings

Cost Estimate: \$1.25 billion

Probability of completion within \$1.25 billion: 90%

Major Risks/Cost Drivers:

•Site Conditions: flowing sand, compressible peat

No established regulatory approval process for creating a river in brownfield

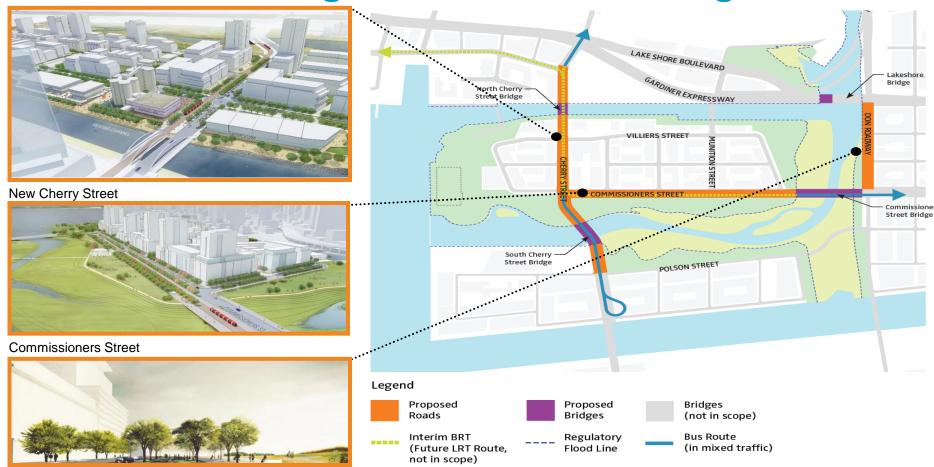
Contingency: 30%

Timeline: Seven-year construction period



Due Diligence – Proposed Elements Cherry Street Polson Street Floodplain Villiers Island Bridge South **Exposed Armour** Large Wood Commissioners Stabilization Edge Street Bioengineered Gravel Bank Wetlands Bank Exposed Area of Barrier Planting Soil Armour Over-excavation Wall Compressible **Buried Grade** Compressible Bedrock Flowing Sands Peat Control Structure Peat

Due Diligence – River Crossings



Don Roadway

Due Diligence – Coordination









Don River Metrolinx Rail Bridge Widening/ Lengthening

GO Transit Electrification

3 Don Rail Yard Expansion

4a Gardiner Expressway East Hybrid 3

Gardiner Expressway-Don Valley Parkway Ramp Demolition

4c Lake Shore Boulevard Realignment

Gardiner East Linear Public Space

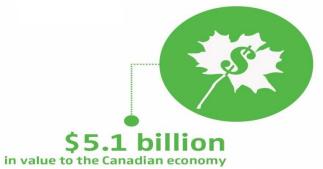
6 First Gulf/Unilever Site

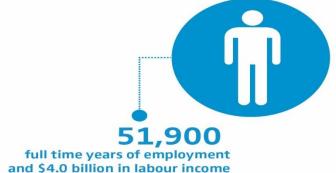
-- The Don River and Central Waterfront Project

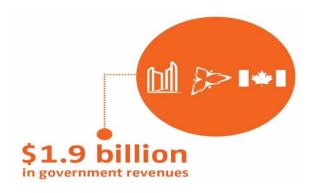


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Benefits - Economy







Source: Economic Impacts of Planned Investments, urbanMetrics, 2016





Ecology & Biodiversity

1,000 meters of new river channel

13 hectares of new coastal wetland

4 hectares of terrestrial habitat

13 hectares of aquatic habitat





Sustainability and Innovation

Test new technologies
Deliver low carbon communities
Reduce emissions; produce energy

Unlocking the Port Lands





















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