

Brownfield Redevelopment: Lessons Learned from the West Don Lands



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Outline

- Site Background
- Challenges
- Successes
- Lessons Learned
 - Site Strategy Development
 - Site Specific Standards
 - Stakeholder Responsibilities
 - Definition in Contracts
 - Long-Term Planning
- Conclusions



Site Background

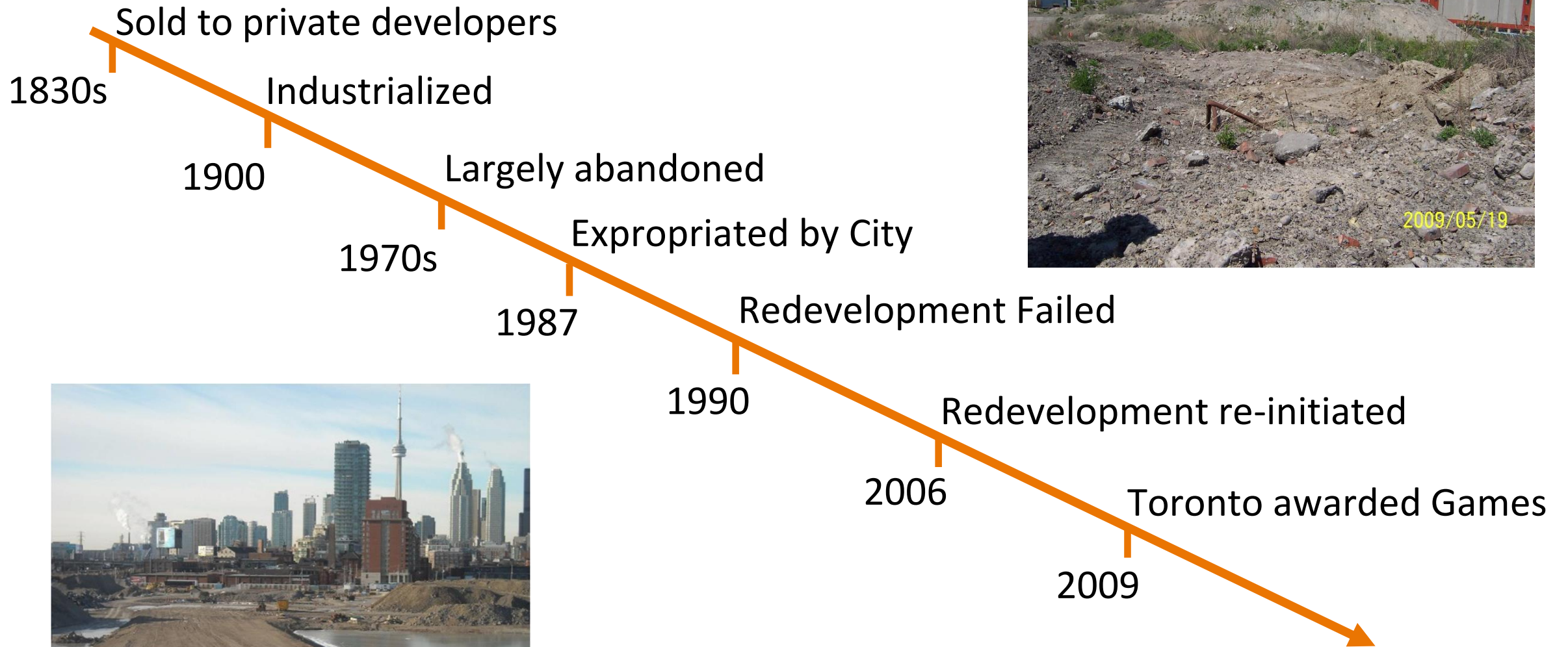


Image courtesy of Waterfront Toronto

Site Background



~ 5.5 years



Site Background



✓ Change to more sensitive land use



Environmental Approvals

✗ Remediation to generic standards



Risk Assessment (RA)

Challenges

Phase One Environmental Site Assessments (ESAs)

Phase Two ESAs

Pre-submission forms (PSFs) and RAs

Certificates of Property Use (CPUs)

Records of Site Condition (RSCs)

**~1.5 years to complete
the Environmental
Approvals**

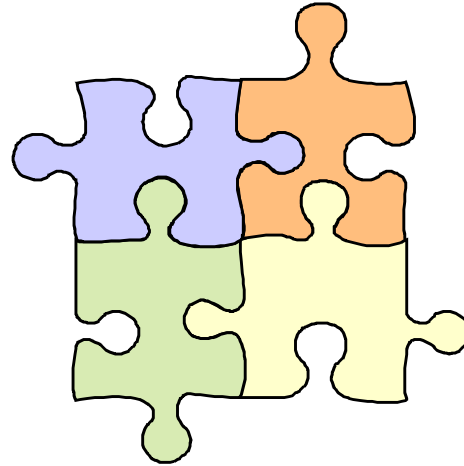


Challenges

Compressed schedule



Site parceling



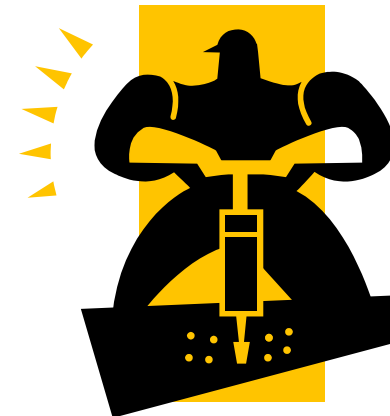
New regulatory process



Multiple stakeholders



Ongoing construction

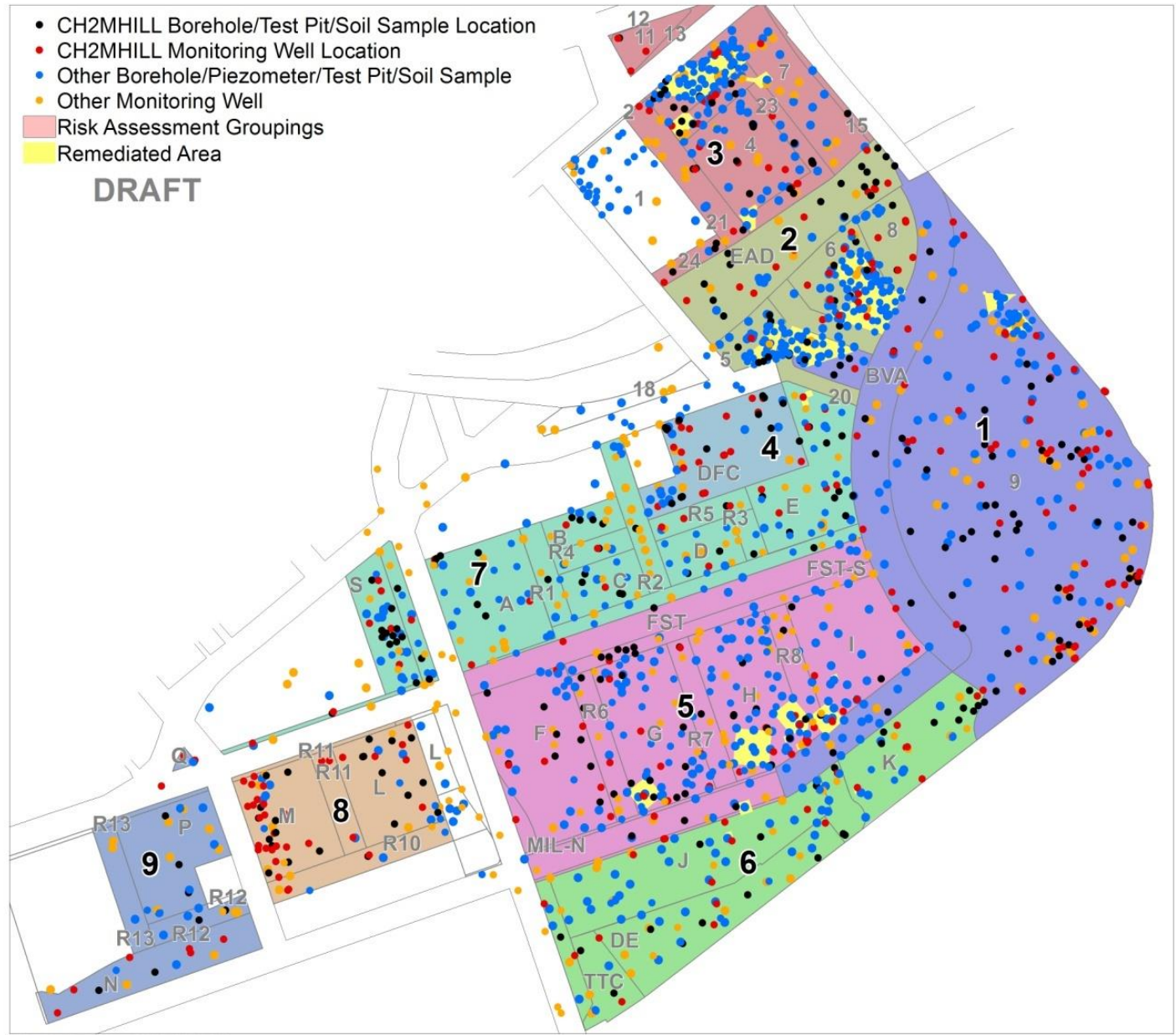


Challenges

- > 600 boreholes
- > 600 groundwater monitoring wells
- > 200,000 data points

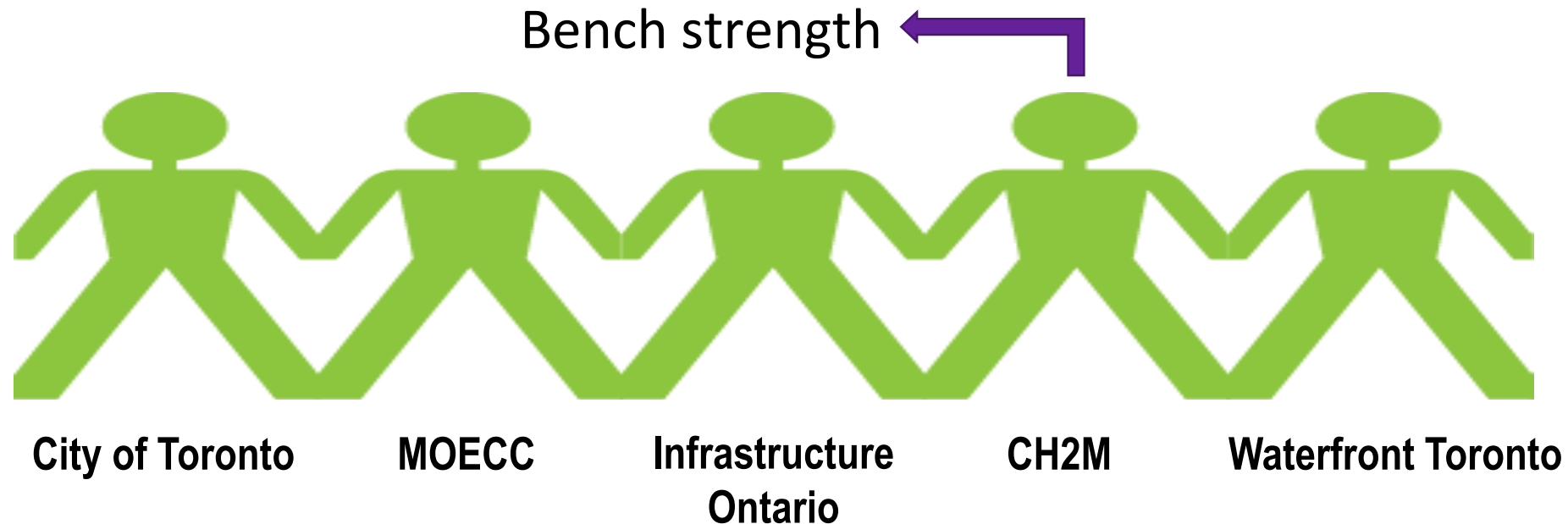


Data Management



Successes

- ✓ Early and continual communication
- ✓ Advance planning and forecasting
- ✓ Comprehensive database
- ✓ Real-time review of data and information
- ✓ Thorough Health and Safety Program
- ✓ Dedicated teams assigned by each stakeholder



Successes

**September
2010**

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**October
2010**

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**November
2010**

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**December
2010**

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Successes

- 4 Phase One ESAs completed
- 8 Phase Two ESAs completed
- 8 RAs accepted
- Remediation on 6 RSC properties
- 13 CPUs finalized
- 13 RSCs acknowledged



Lessons Learned



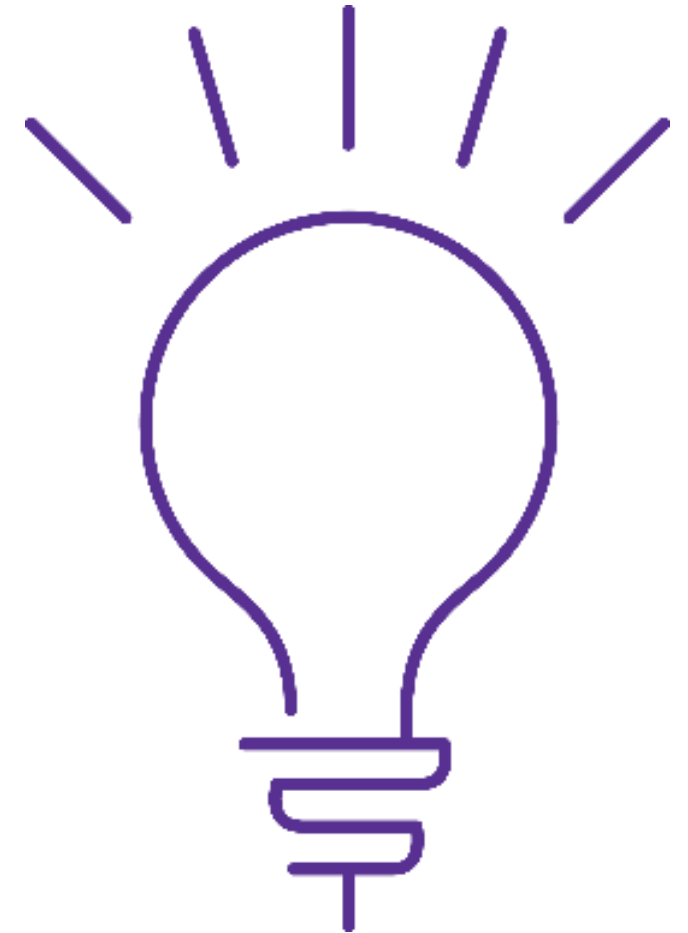
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Lessons Learned

Redevelopment process extends long past the receipt of the environmental approvals

Optimizing redevelopment process requires:

- ✓ Holistic approach that considers outcomes through each stage
- ✓ Consideration of how the site will be developed and managed in the long-term



Lessons Learned – Site Strategy Development

Brownfield redevelopment occurs in stages

Site Investigation

**Optimal planning considers
outcomes holistically**

Redeveloped Site

Land Use Controls (LUCs)

Long-term Monitoring/Maintenance

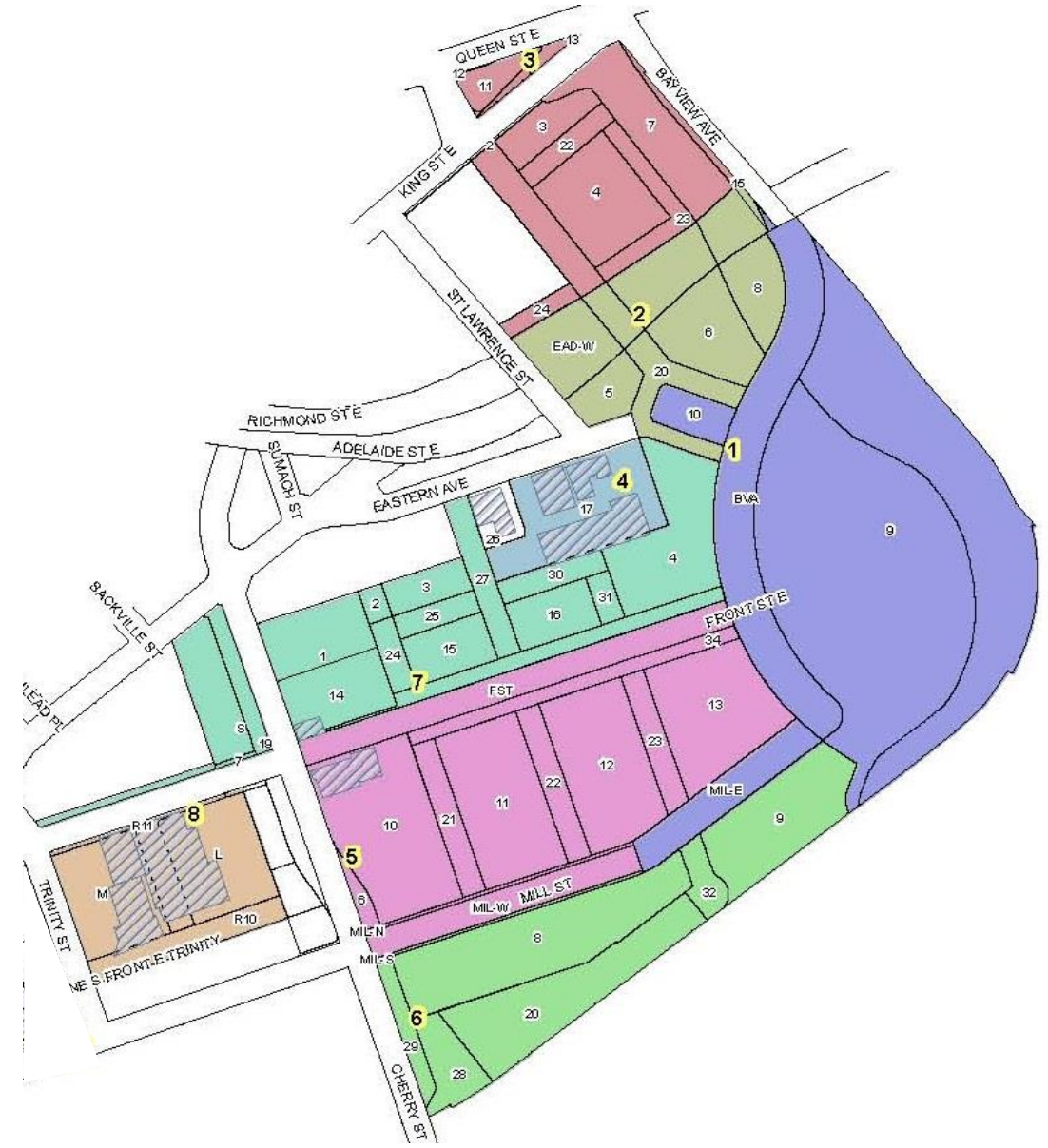
Lessons Learned – Site Strategy Development

1. Consider:

- Similar impacts
- Land use projections
- Land ownership
- Phased construction
- Priority areas/stakeholder goals
- Regulatory requirements following receipt of environmental approvals

2. Optimize:

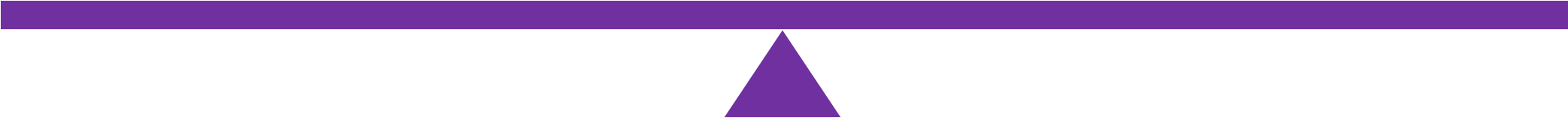
- Site parceling plans
- Cost/benefit by parcel



Lessons Learned – Site Strategy Development

Site investigation \$\$
Remediation \$\$

Risk Assessment \$\$
LUC construction \$\$
Long-term management \$\$

- 
- ➔ Cost/benefit analysis of managing contaminants in place versus removing contaminants
 - ➔ Consider short- and long-term costs; strategic site development



Lessons Learned – Site-Specific Standards

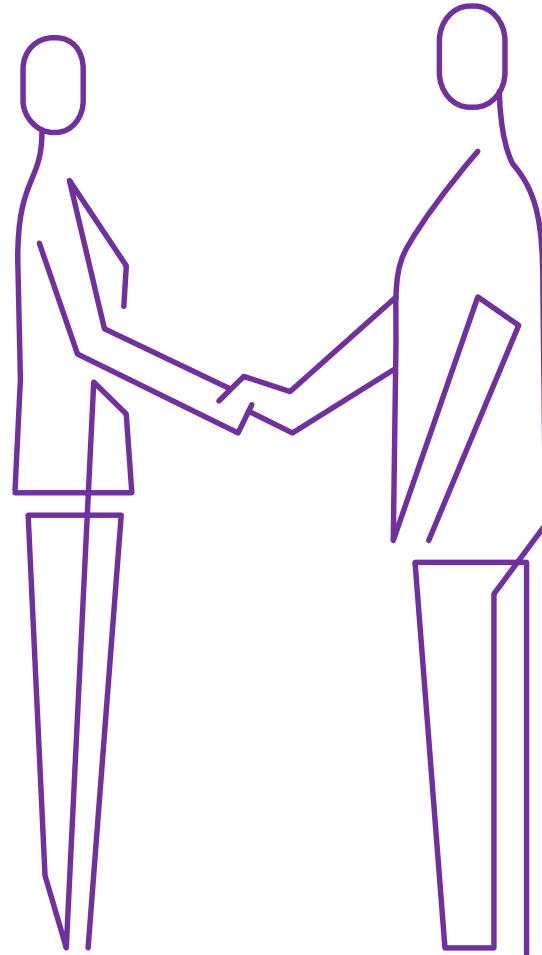
Identification of applicable Standards and Chemicals of Potential Concern requires consideration beyond ESA and permitting process



- Fill cap construction, soil importation/exportation
- Groundwater and vapour/air monitoring programs



Lessons Learned – Stakeholder Responsibilities



Lessons Learned – Definition in Contracts

Management of monitoring programs

**Consideration of
phased construction**

**Timing of land
conveyance**

**Obligations of
contractors**

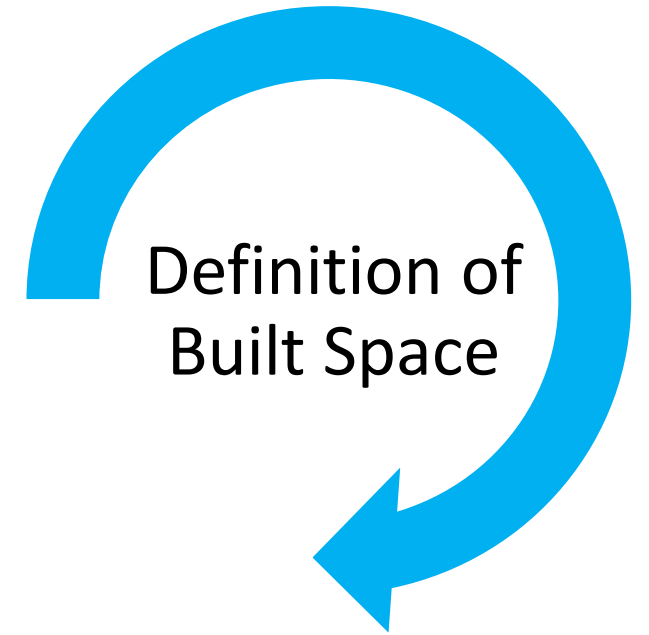
**Obligations of future
owners**

**Environmental
documentation**

**Obligations of future
occupants**



Lessons Learned – Long-term Planning



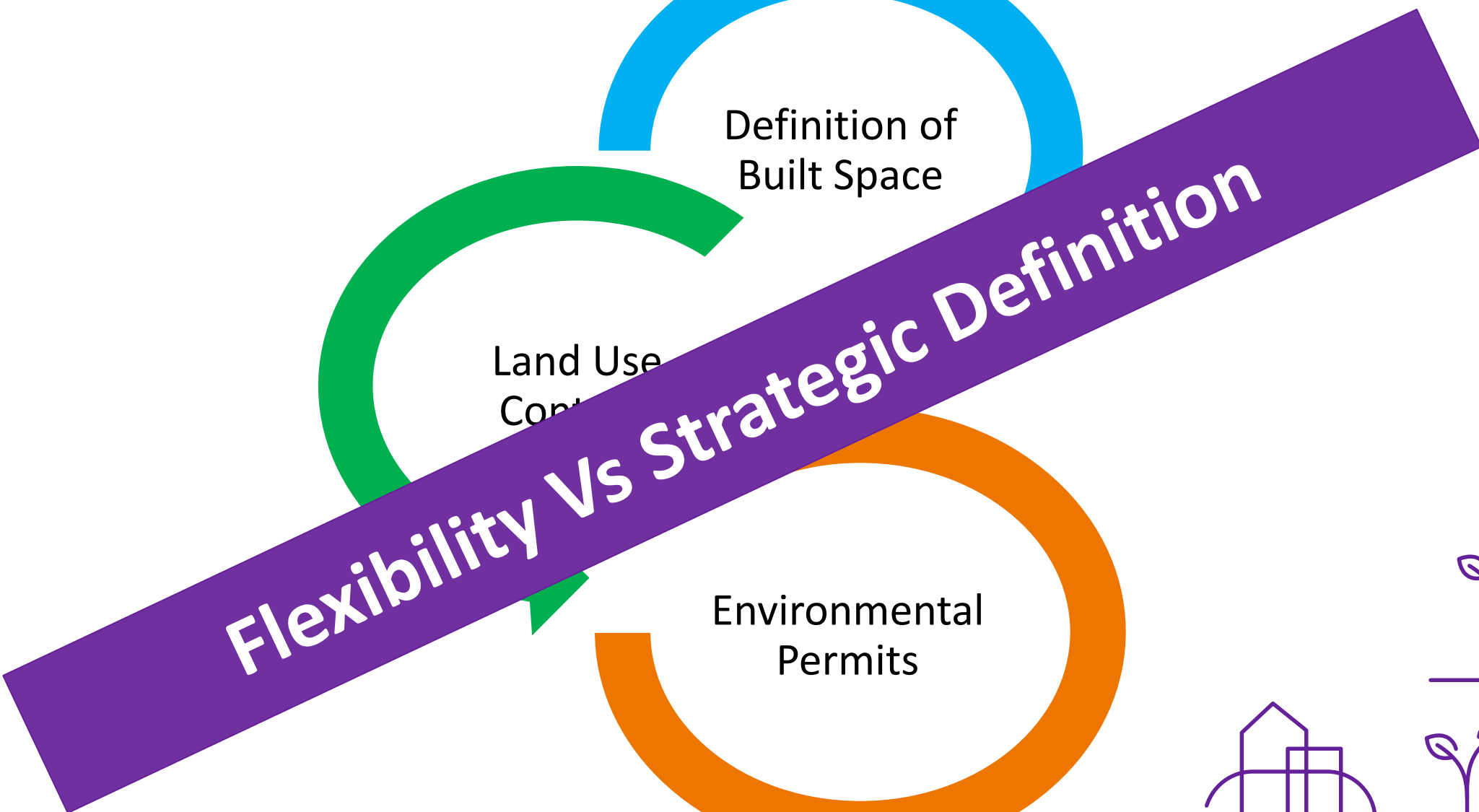
Lessons Learned – Long-term Planning



Lessons Learned – Long-term Planning



Lessons Learned – Long-term Planning



Conclusions

- Holistic approach to environmental approvals with consideration of long-term site management
- Stakeholder and contractual relationships evolve with the development of the site
- Environmental permits provide flexibility for the various built space options and/or strategically define requirements



Thank You

