

The Redevelopment of Oshawa Harbour

Conversion of Federal Contaminated Land into a Municipal Waterfront Park through Site Assessment, Risk Management, and Soil Management

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- Remtech East – May 31, 2023



Oshawa Harbour — Conversion to Parkland

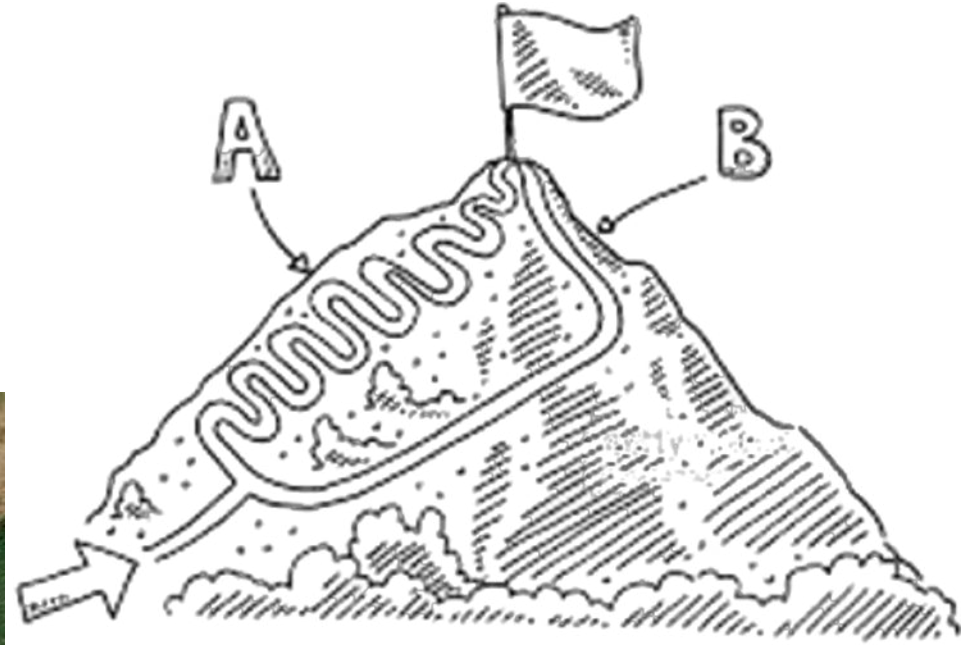
Presentation Overview:

- Project Objective and Stakeholders;
- Remedial Approach Selection;
- Record of Site Condition Process;
- Risk Management Implementation/Construction;
- Certificate of Property Use and Ongoing Improvements.



Parkland Objective

- Finding the best path forward



Parkland Objective – New Ed Broadbent Park



Stakeholders

- Federal Government – Land Owner;
- City of Oshawa - Land Recipient;
- Ontario Government – MECP, Ontario Regulation 153/04;
- Conservation Authority – Central Lake Ontario Conservation Authority (CLOCA).

Background

- Federal Lands for Transfer to City;
- Former OLCO Lands Acquired by City;
- Decades of Previous Studies on behalf of Federal Government;
- Risk Assessment and Risk Management Implemented to Satisfy Federal Requirements;
- Transfer Process had fixed deadline for acceptance and use as parkland, or penalties were defined.

Oshawa Harbour and West Wharf Lands



Remedial Approach Selection

Limiting Factors:

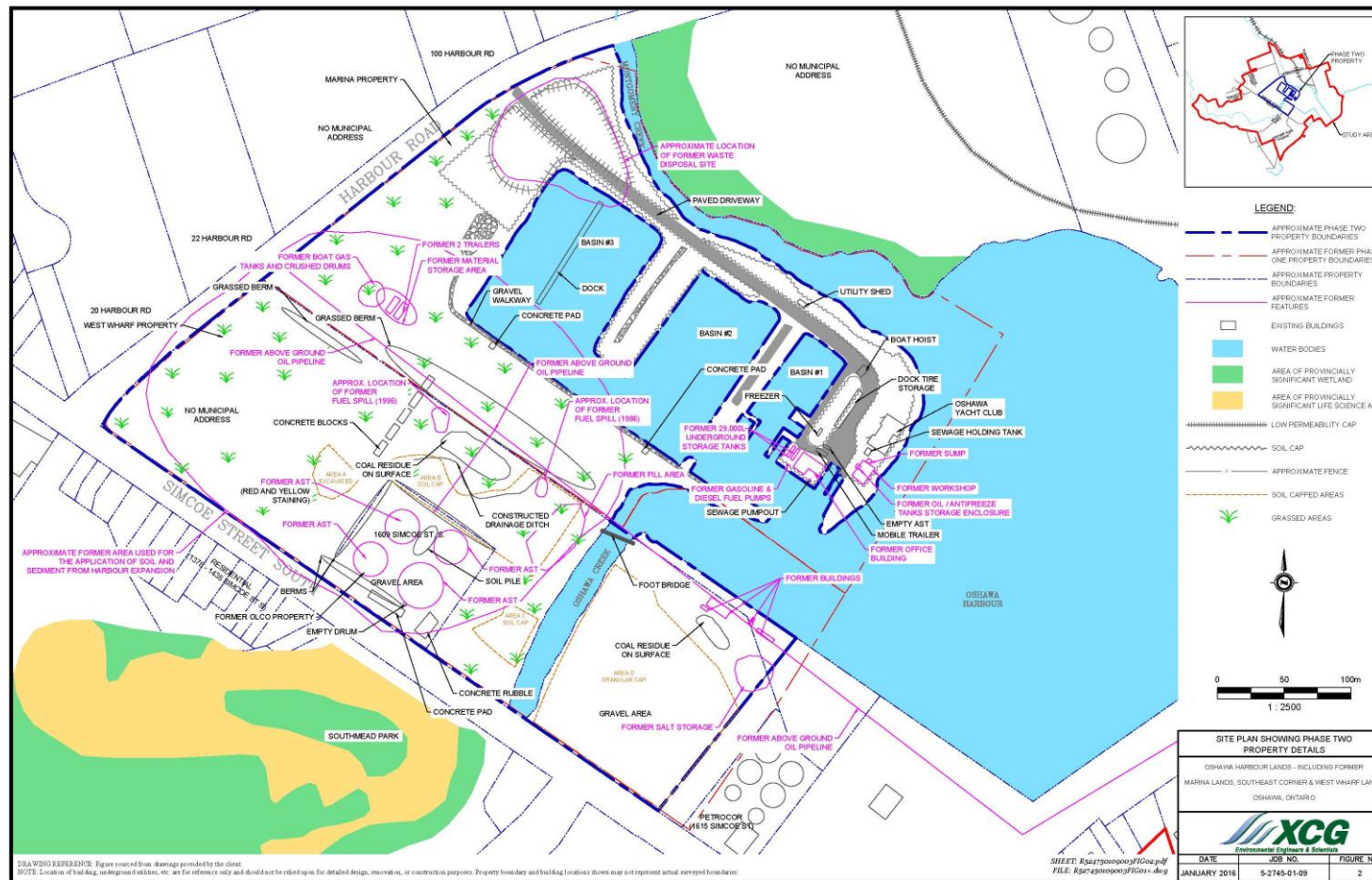
- Federal Deadline for Transfer Agreement;
- Provincial Regulation 153/04 Regulated Review Timelines.

Approach selected to achieve outcome within limited timeline:

- Initial RSC to be obtained without design and construction of any new park features* .

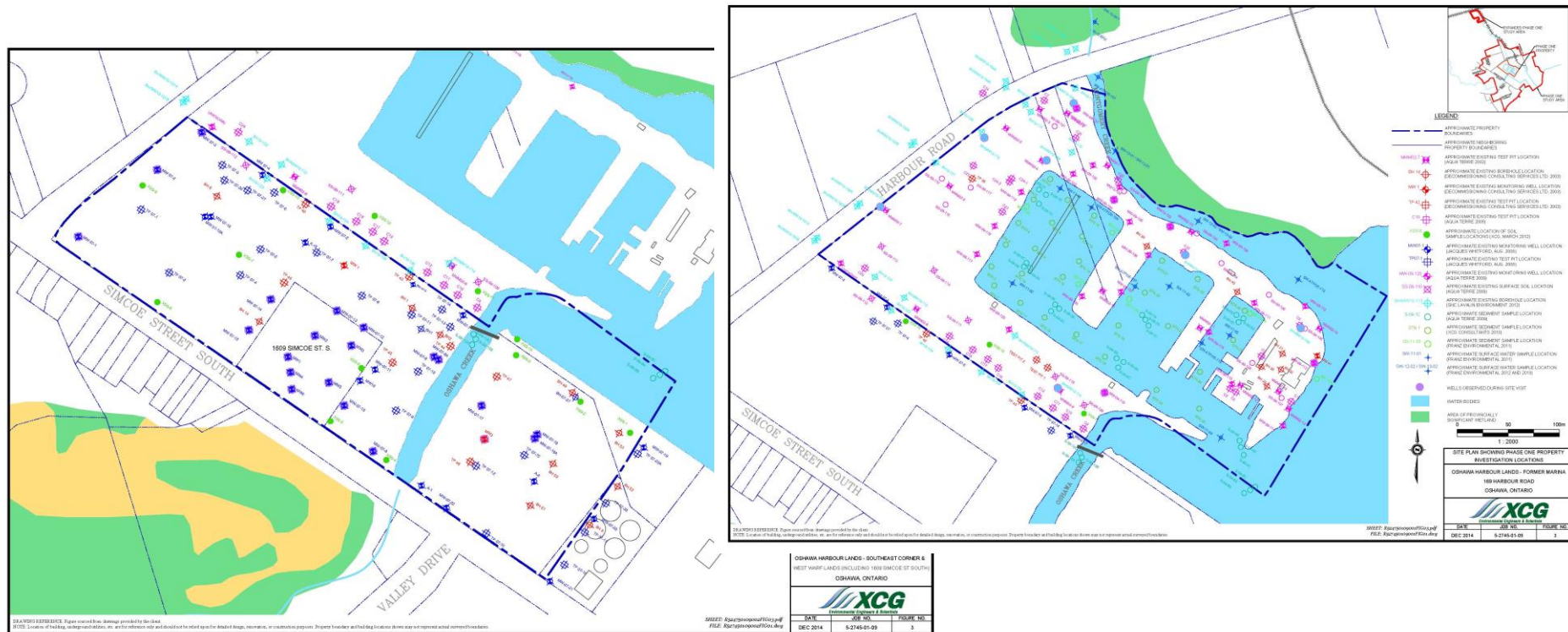
Record of Site Condition Process

- Define RSC Lands (Contiguous Parcel).



RSC Process – Phase One ESA

- Phase One ESAs completed on Two Parcels (Marina Lands and West Wharf Lands).



RSC Process — Phase One ESA

- Historic Industrial Uses;
- Previous Report Reviews;
- Identification of Potentially Contaminating Activities (PCAs) and Areas of Potential Concern (APEC);
- Sensitive Site (pH and adjacent wetlands);
- Validate representative data from recent existing studies.

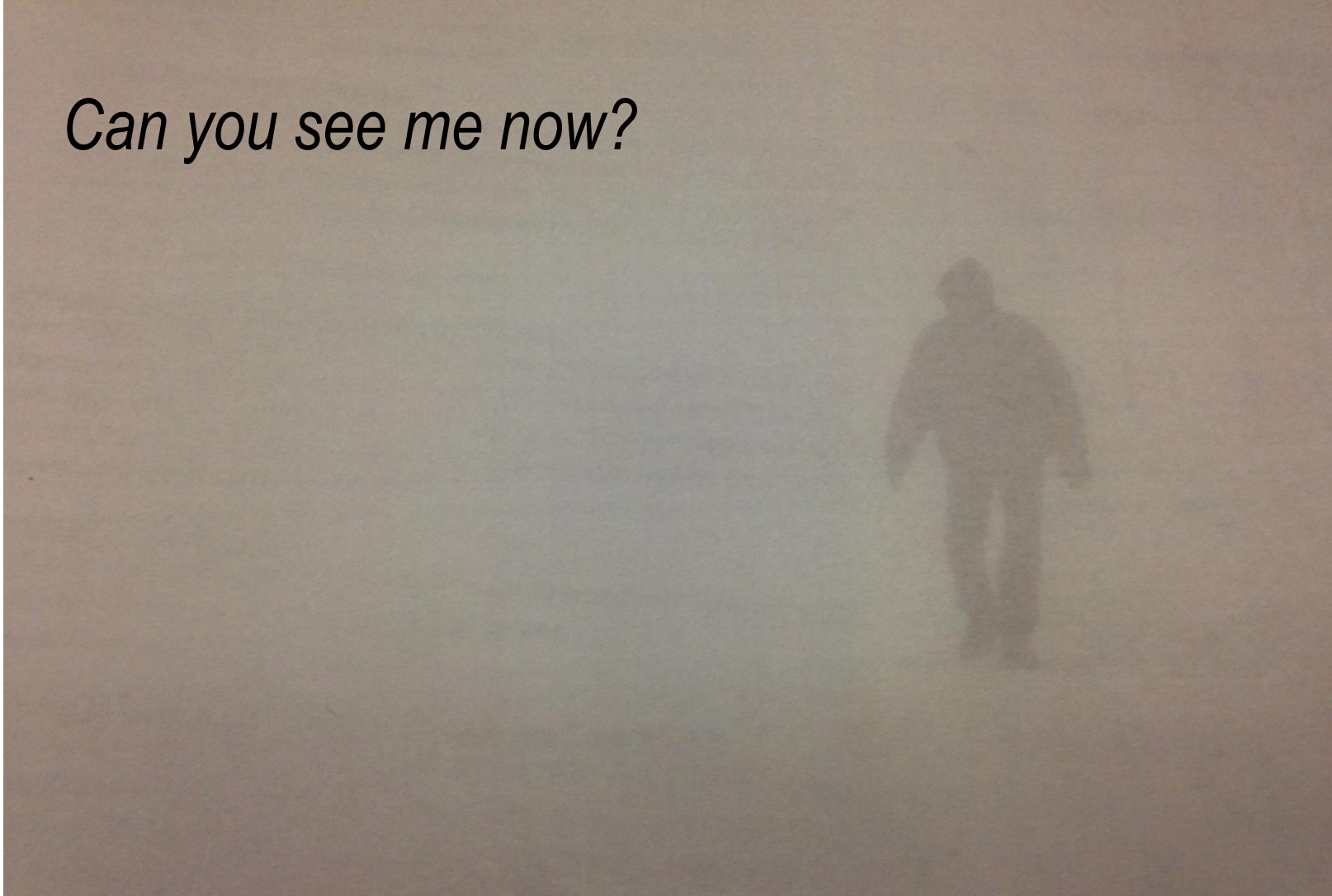


RSC Process - Phase Two ESA

- Pre-Consultation with MECP and City:
 - Define Supplemental Phase Two to achieve lateral and vertical delineation to satisfy O. Reg. 153/04;
 - Agreement by MECP Permissions Branch to Review CSM throughout RA Process.
- Execute additional field investigations:
 - Soil, groundwater, sediment, surface water.
- Reporting.

Phase Two – Winter Conditions

Can you see me now?



Access and Safety



Snow and Freezing Temperatures



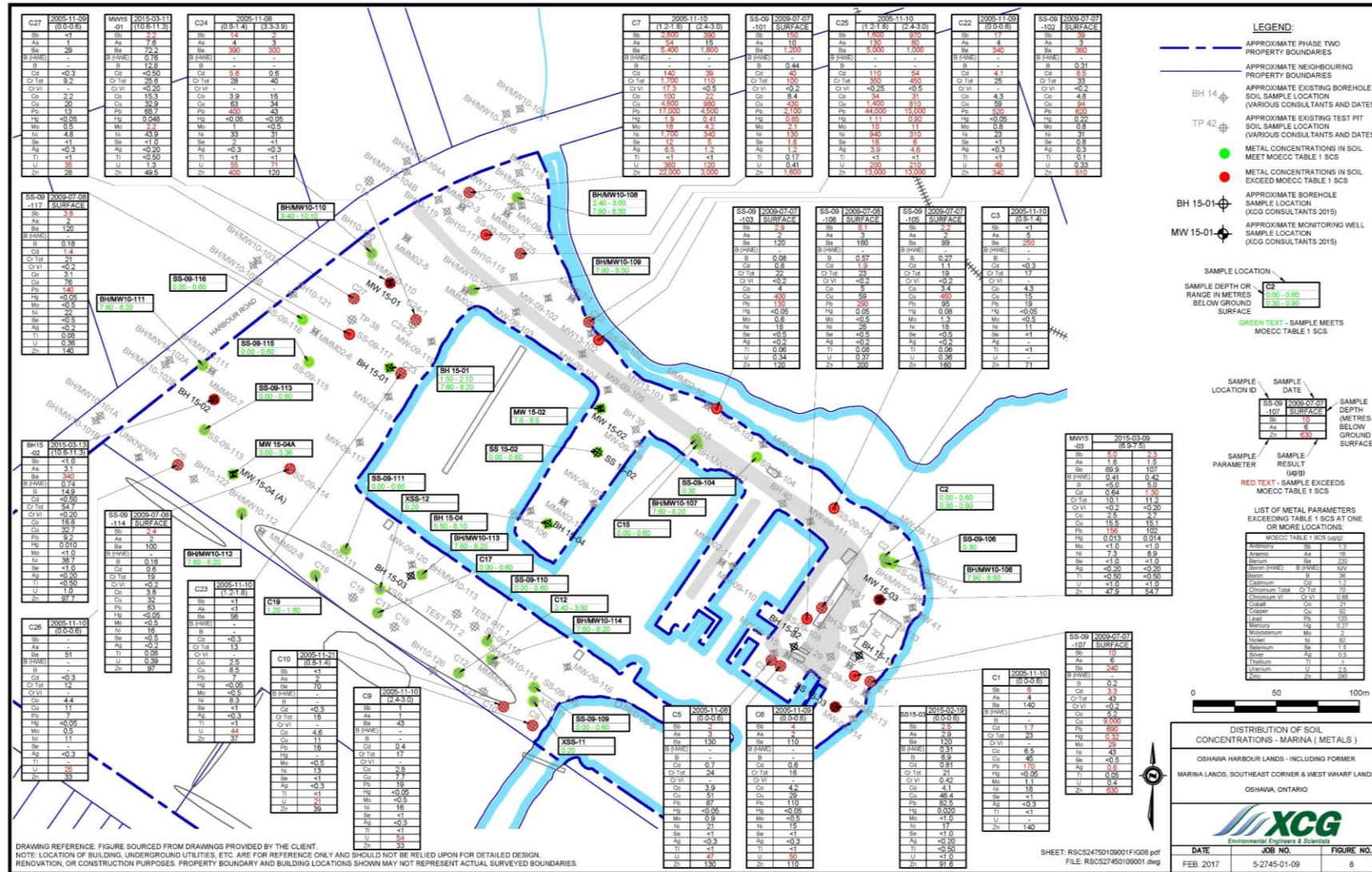
No, You push, I'll Drive

Phase Two - Contaminants

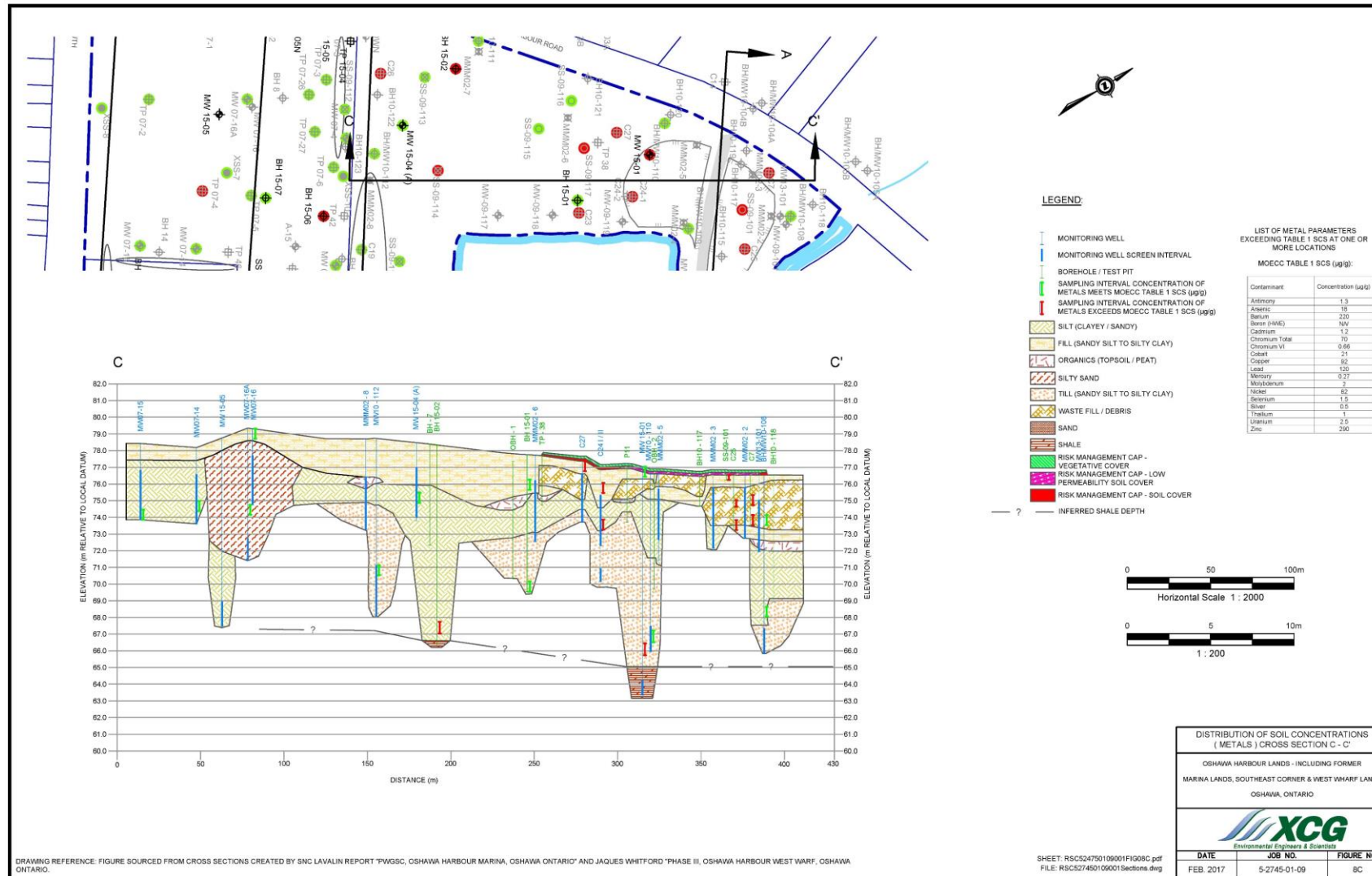
- Applicable criteria – Table 1
Background;
- Contaminants identified associated with historic on-site and off-site activities:
 - Metals;
 - Hydrocarbons (PHCs and PAHs);
 - Volatile Organic Compounds.
- Use of Non-standard delineation approach before regulation was amended (PAHs in groundwater).



Phase Two – Conceptual Site Model



Phase Two – Conceptual Site Model



Risk Assessment

- Risk Assessment (RA) Approach with Risk Management Plan (RMP).
- Teamed with MTE GlobalTox to complete the RA efforts.
- Open Dialogue with MECP following each RA Review period.
- RA accepted following two submissions with minor additional comments addressed.



Risk Management Plan

- Capping of defined areas (surveyed):
 - Prescribed capping system alternatives.
- Erosion Control measures adjacent to capped areas.
- Vapour Controls for any future buildings.
- Soil and Groundwater Management Plan.
- Health and Safety Plan.

Capping Areas



Flood Plain Evaluation

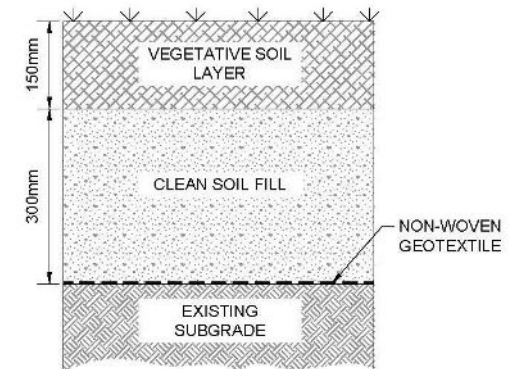
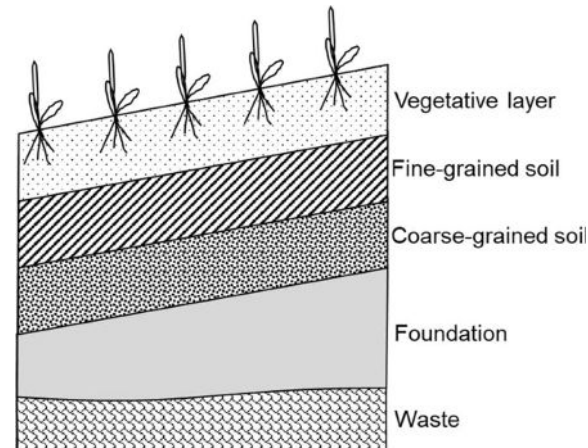
- Review of Impact of Proposed Capping on Flood Levels – Oshawa Creek:
 - City of Oshawa provided updated ground survey data;
 - XCG completed updated HEC-RAS model hydraulic modelling;
 - Modelling was used to support the ultimate selection of 0.3 m shallow soil cap thickness.



Construction

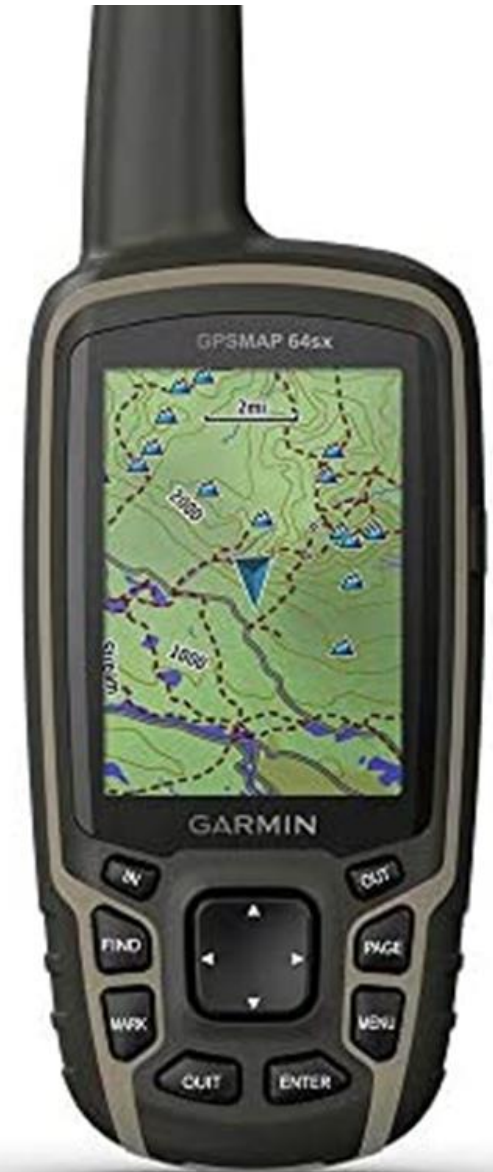


- Why bring in a landfill guy?
 - Capping was similar to a landfill final cover; and
 - My construction and contract management experience.



Construction

- Main difference between this capping and landfill work?
 - Tracking soil load locations and depths.



Construction

- Surface water was key:
 - Repaired the existing swale to take the surface water run-off.



Construction

- Erosion and Sediment Control:
 - Obviously preventing impacted soil from eroding into the harbour was important.



Construction

- Safety and Useability Issues:
 - Increasing the grade in the parking area lead to unique challenges.



Construction

- Unexpected challenge?
 - Hydroseeding and seagulls.



Construction

- The payoff?
 - The installation of the new pedestrian bridge.



Ongoing CPU Compliance Assessment

- City has issued contract to design and construct parkland improvements.
- XCG contracted by Harrington McAvan to provide QP Services:
 - Initial review of conceptual plans;
 - Review of select plan and various design stages;
 - Conformance with CPU;
 - Notice of modifications of caps to MECP.



Conceptual Park Improvements





QP Services – CPU Conformance

- XCG acted as QP during construction process:
 - Verification of maintenance of caps retained;
 - Verification of modified cap construction;
 - Proper importation of excess soil (During 2022 – Pause of Certain Excess Soil requirements):
 - Source Site Review and Testing;
 - Receiving Confirmatory Testing.
- Provided Final As-Constructed Documentation – Capping areas to MECP.

Ed Broadbent Park – Improvements



Ed Broadbent Park – New Features



Ed Broadbent Waterfront Park



Ed Broadbent Waterfront Park



Walking Bridge



Ed Broadbent Waterfront Park



Thank you!

Questions/Comments?

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