Finding Solutions to Unique Challenges associated with Redeveloping Major Urban Shopping Centres

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Introduction

Why redevelop a mall?

I. Stay competitive
II. Neighborhood revitalization (in co-operation with municipality).
III. Attract profitable, sustainable tenants

BUT ... legacy environmental issues can impede redevelopment
Legacy environmental issues can be associated with the mall or adjacent businesses

Examples:

• Service stations, automobile repair centres
• Vehicle fleet services
• Dry cleaners
• Elevators, trash compactors
• Hazardous Building Materials removal during construction:
  • Asbestos
  • Lead
Today’s malls are shifting from solely retail space to large mixed developments ... introducing other complicating factors:

- Legal parcels/zoning
- Multiple stakeholders with different remedial goals
- Off-site considerations
BC Regulatory Landscape

- Site Profile
- Stage 1/2 PSI
- DSI
- AG 6
- RAP
- Remediation
- AiP
- Initial Permits / DP

- Municipal Permit Release / Final Occupancy

<table>
<thead>
<tr>
<th>BC</th>
<th>Stage 1 / 2 PSI</th>
<th>DSI</th>
<th>Remediation</th>
<th>MOE Instrument</th>
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<tr>
<td>Alberta</td>
<td>Phase 1/2 ESA</td>
<td>Supp’l Phase 2</td>
<td>Phase 3</td>
<td>Remediation or Reclamation Certificate</td>
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Challenges to Redevelopment

1) Environmental investigations cannot interfere with mall operations
2) Incorporating varied historical data
3) Co-mingled plumes, off-site impacts
4) Cooperating with multiple owners / consultants
5) Changing regulatory landscape
6) Adapting risk assessment to changes in developers’ vision
7) Assuming significant & potentially unforeseen environmental costs.
Finding Solutions

1) Apply Administrative Guidance 6.
2) Remediate during development.
3) Designate site a “flow-through” site.
4) Remove an impacted area that is someone else’s responsibility.
5) Risk Assessment and development plans.
6) Work cooperatively with 3rd party property owners and their consultants.
7) Obtain background groundwater determinations.
8) Alter the design to minimize the risk.
Case Study #1

Challenges
- On-Site APECs
- 3rd-Party APECs
- Timing

Solutions
- Conventional
- Innovative

Determination
Case Study #1 - Challenges

+ off-site

Service Station #1

Former Auto Repair

Sumps, Elevators

Service Station #2
Case Study #1 - Solutions

+ off-site

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<tbody>
<tr>
<td>Elevators, sumps</td>
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<td>Auto Repair</td>
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<tr>
<td>Hydraulic Trash Compactors</td>
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<tr>
<td>Offsite</td>
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<td>Service Stations /Plumes</td>
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Determinaion

Occupancy

Grand Reopening !!
Case Study #2 - Challenges

- Diesel UST
- Former Dry Cleaner
- Former Service Station

+ off-site
Case Study #2 – Solutions

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<td>VOC plume</td>
<td>Flow-through</td>
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Released Development Permit
Mall redevelopments pose complex and challenging issues for owners, regulators, consultants, and municipalities.

Resourcefulness and cooperation have brought success to these two projects and set a strong foundation for future mall redevelopment projects.
Thank you. Questions?

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