



# 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



# Introduction (cont'd)

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

# Introduction (cont'd)

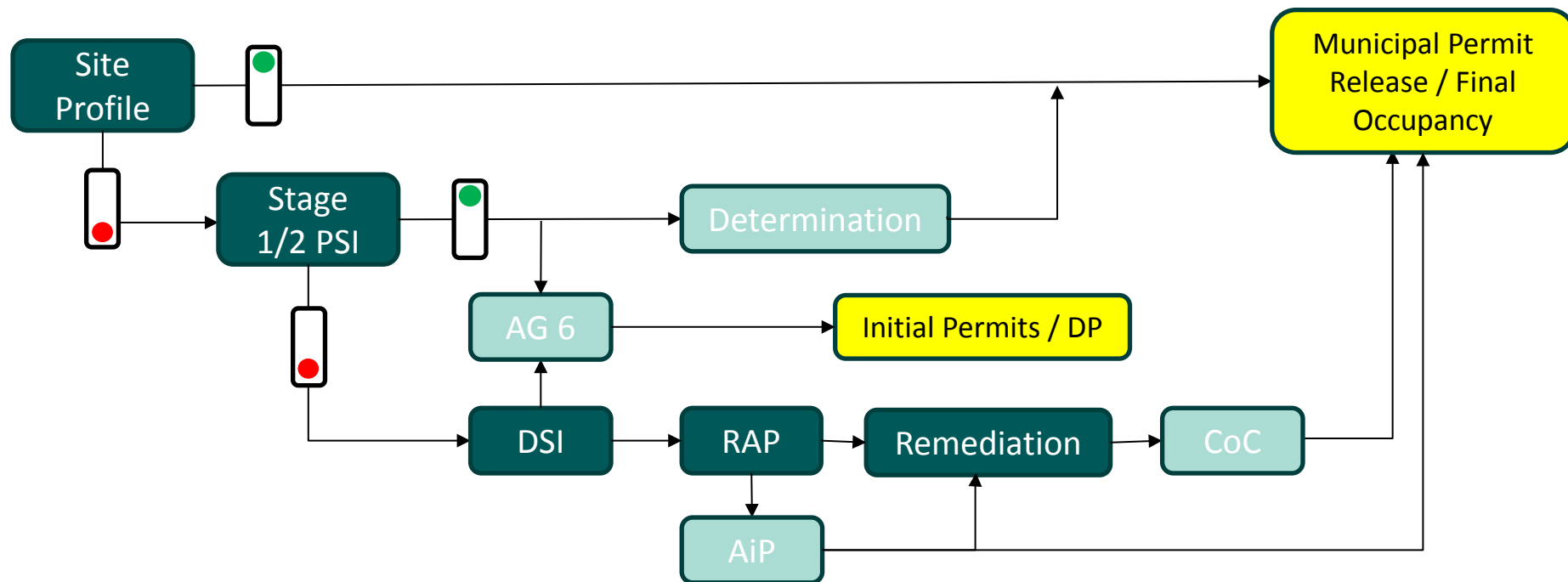
Today's malls are shifting from solely retail space to large mixed developments

... introducing other complicating factors:

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

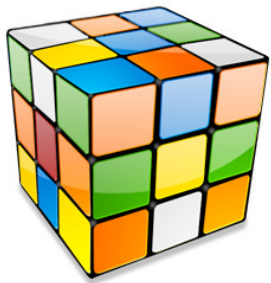


# BC Regulatory Landscape



<b>BC</b>	Stage 1 / 2 PSI	DSI	Remediation	MOE Instrument
<b>Alberta</b>	Phase 1/2 ESA	Supp'l Phase 2	Phase 3	Remediation or Reclamation Certificate

# 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 3<sup>rd</sup> 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
- 3<sup>rd</sup>-Party APECs
- Timing

Solutions

- Conventional
- Innovative

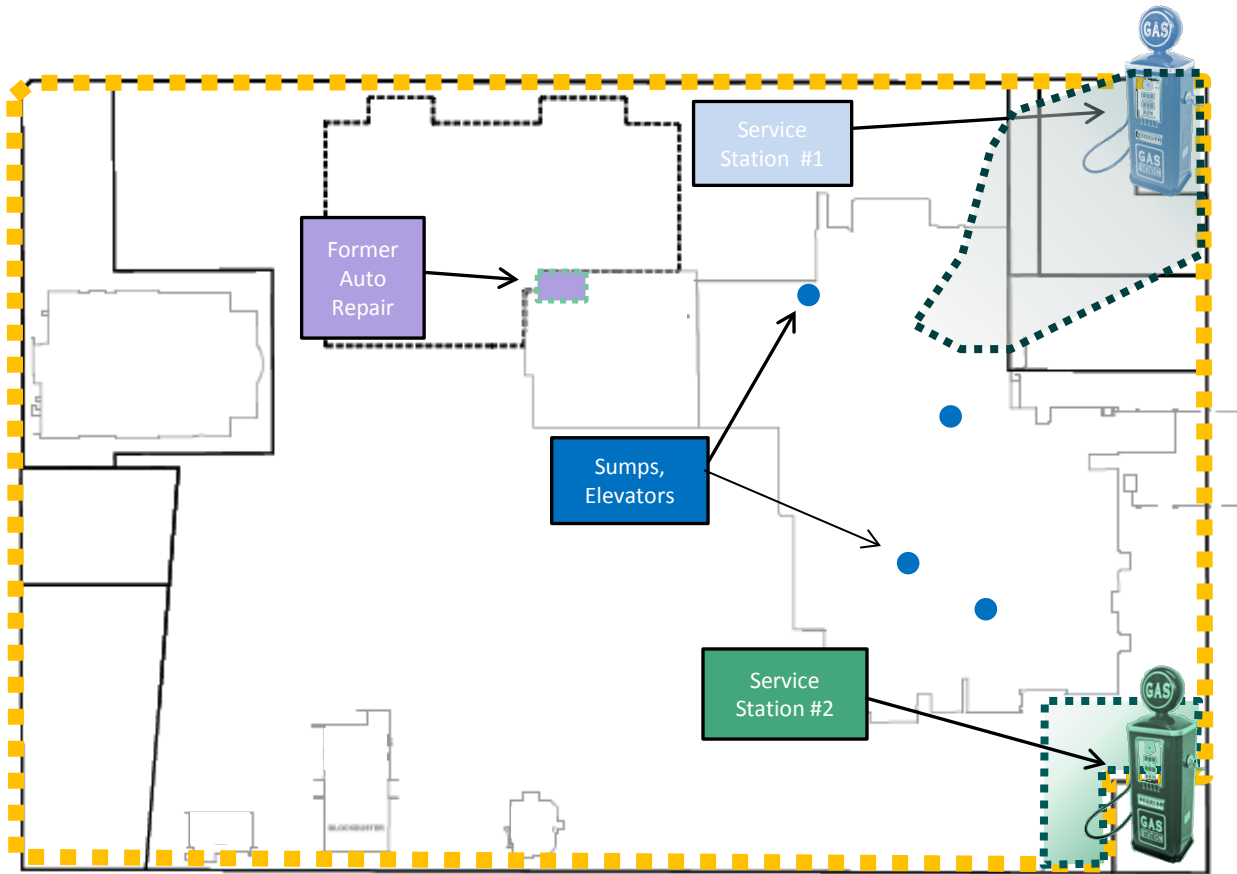
Determination





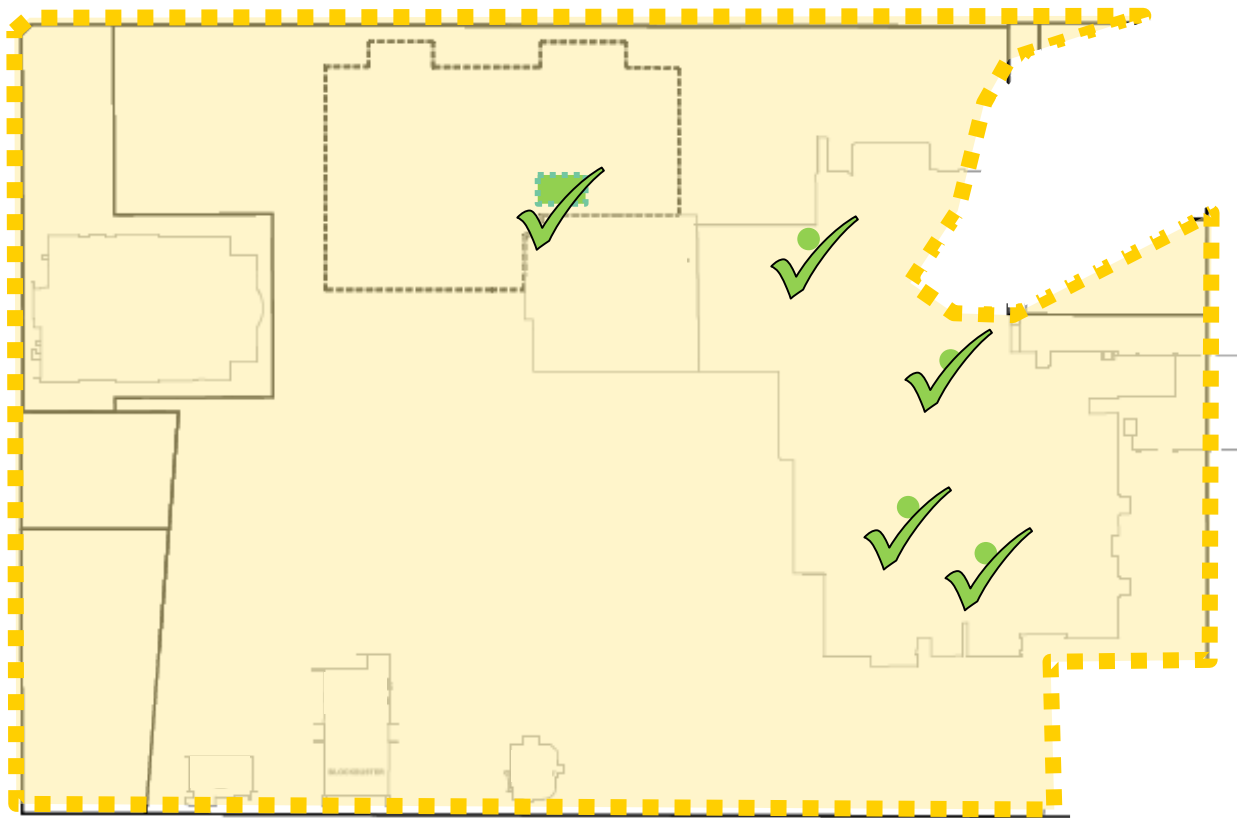
# Case Study #1 - Challenges

+ off-site



# Case Study #1 - Solutions

+ off-site



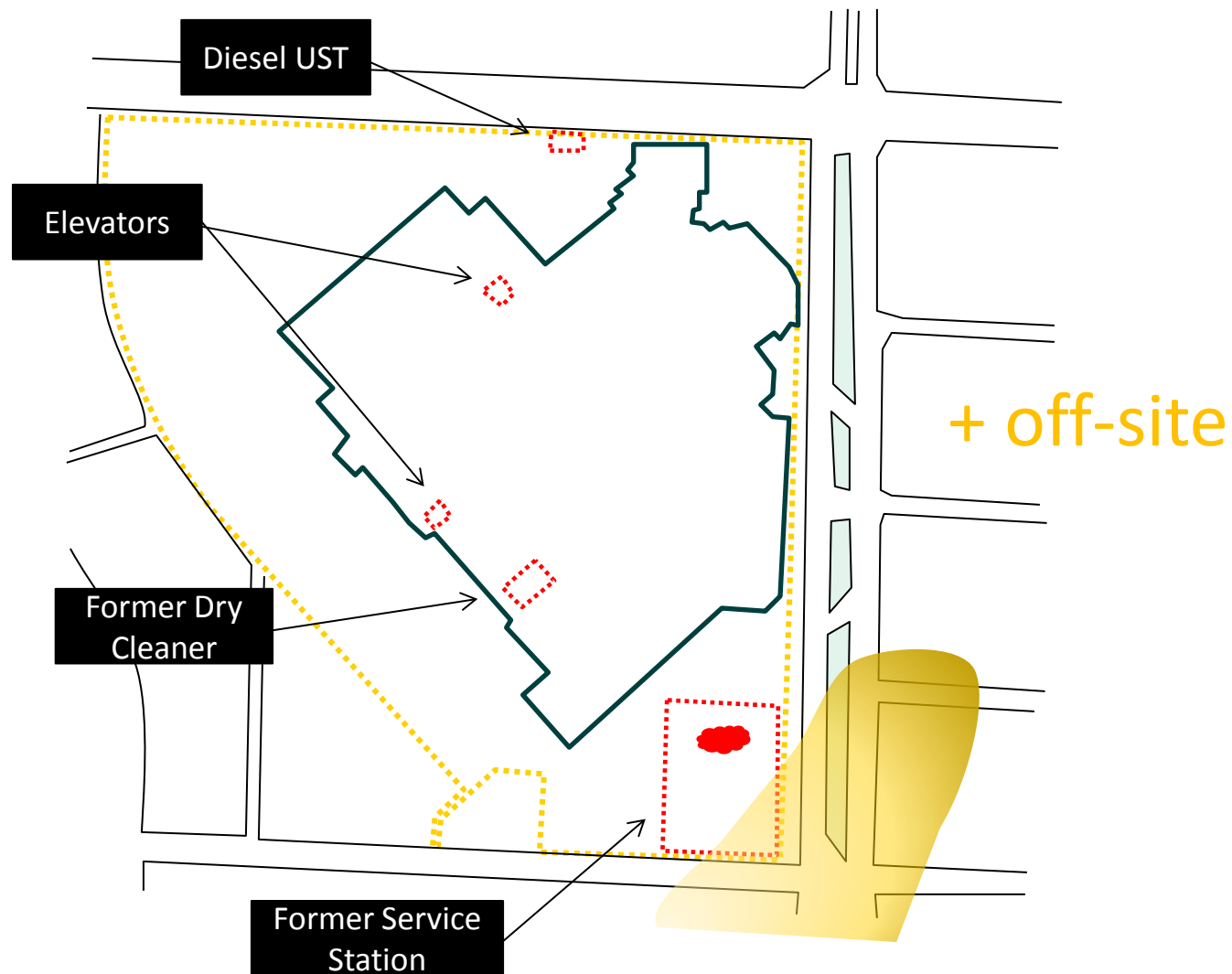
Elevators, sumps	✓
Auto Repair	✓
Hydraulic Trash Compactors	✓
Offsite	✓
Service Stations /Plumes	Carved Out

**Determination**

**Occupancy**

**Grand Reopening !!**

# Case Study #2 - Challenges



# Case Study #2 – Solutions



UST	✓
Elevators	Defer
On-site Dry Cleaner	✓
Soil at Service Station	AiP → defer
VOC plume	Flow-through

**Released Development Permit**

# Summary



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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