



Elevation 2.0 Conference

Tree Regulations Toolkit

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Presentation Outline



- About the toolkit
- Overview of the tools:
 - High-level plans
 - Tools regulating land use – space for trees
 - Tools primarily focused on regulating trees



Why this toolkit?



- Canopy cover is projected to decline over the next 20-30 years
- Interest from member jurisdictions for more information
- **Purpose of the toolkit:** to serve as a resource on using regulatory tools that influence the preservation and growth of trees and tree canopy.



Toolkit Framework



Regulating trees in...

1 | Forest Stands and Naturalized Areas

2 | Urban Areas





An Overview of the Tools

The Tools



- **Higher-level plans**
- **Tools regulating land use (space for trees):**
 - Zoning bylaws
 - Subdivision and servicing bylaws
- **Tools primarily focused on regulating trees:**
 - Environmental development permit areas
 - Covenants
 - Tree bylaw

Case Studies & References



SEATTLE'S EXCEPTIONAL TREE PROTECTION ZONING

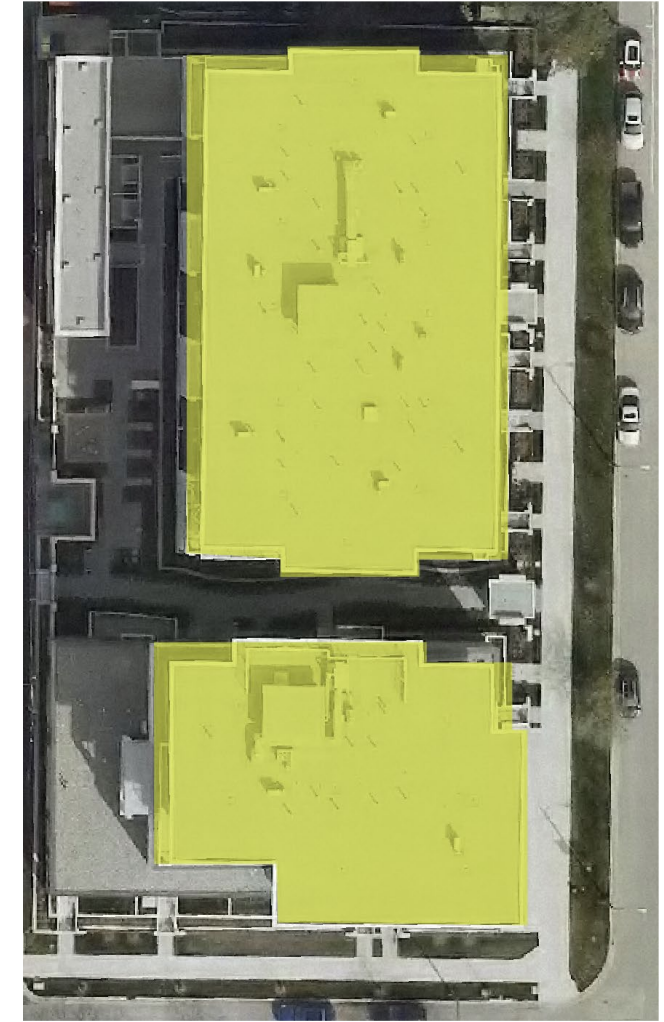
Examples

In Practice

Land Use Tools: Zoning



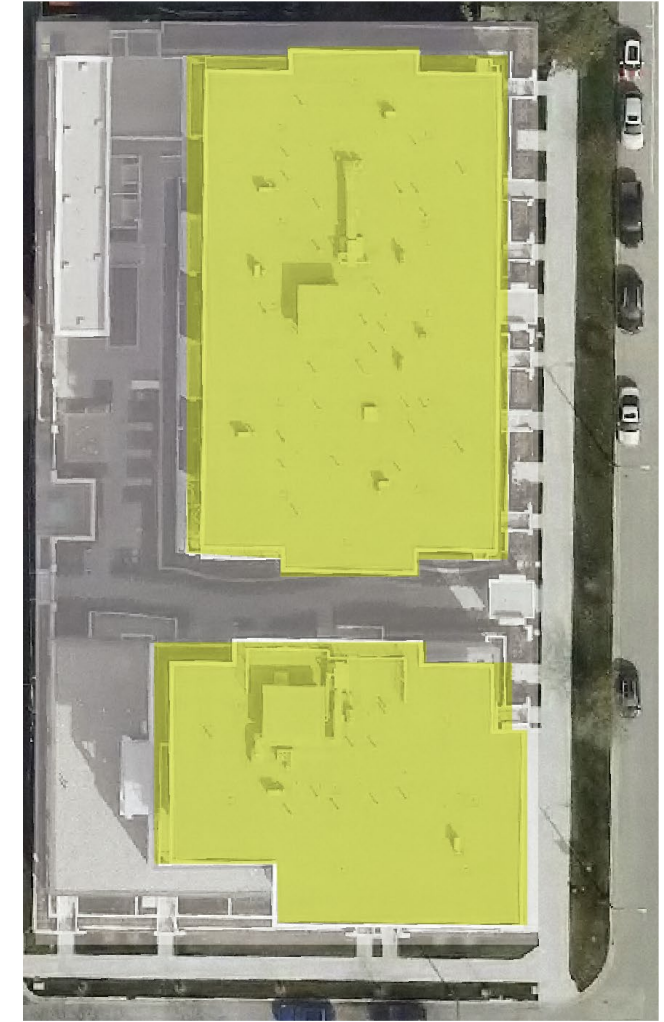
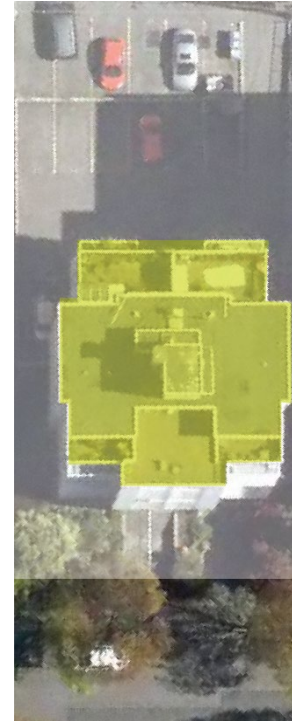
- Providing space to plant trees on private land:
 - Site coverage



Land Use Tools: Zoning



- Providing space to plant trees on private land:
 - Site coverage
 - Minimum pervious cover
 - Maximum impervious cover



Land Use Tools: Zoning



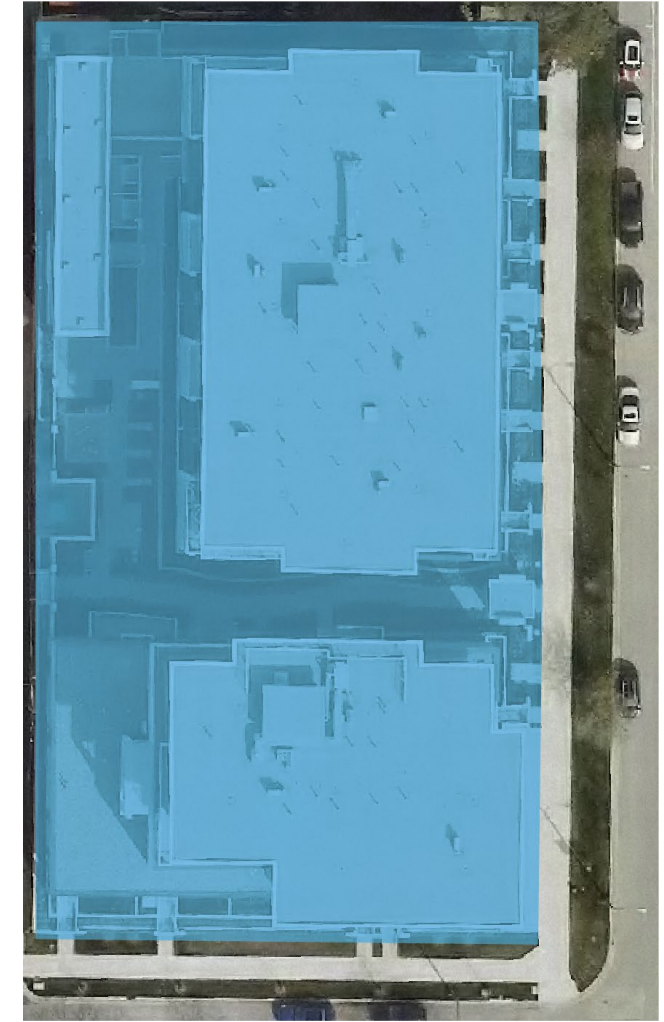
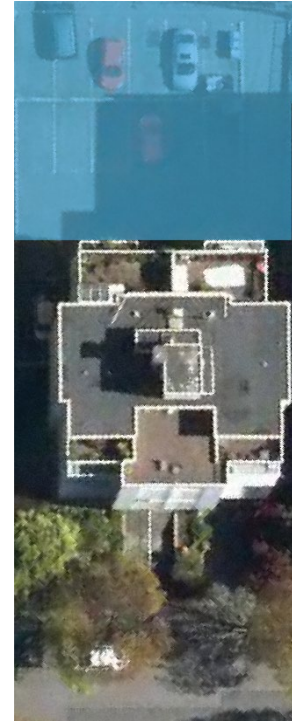
- Providing space to plant trees on private land:
 - Site coverage
 - Minimum pervious cover
 - Maximum impervious cover
 - Setbacks



Land Use Tools: Zoning



- Providing space to plant trees on private land:
 - Site coverage
 - Minimum pervious cover
 - Maximum impervious cover
 - Setbacks
 - Underground structures
 - Parking



Land Use Tools: Zoning



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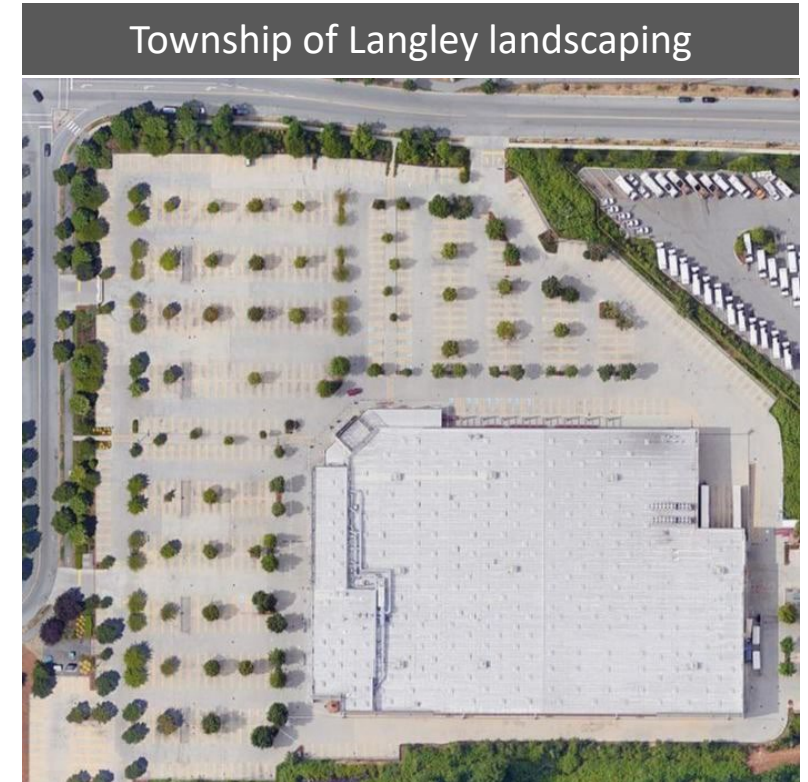
Ottawa Missing Middle Zoning

Contiguous landscaping area requirement

Land Use Tools: Zoning



- Additional zoning tools:
 - Screening and landscaping



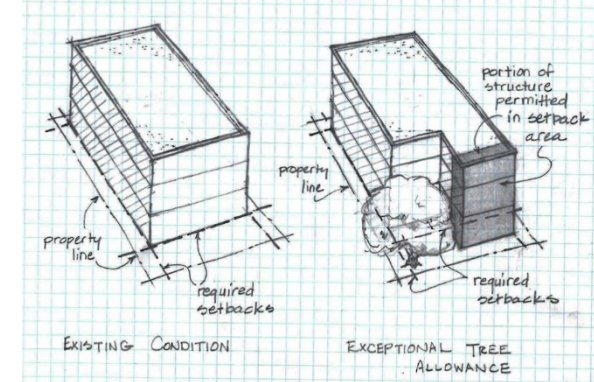
Commercial landscaping tree density per parking stall requirement



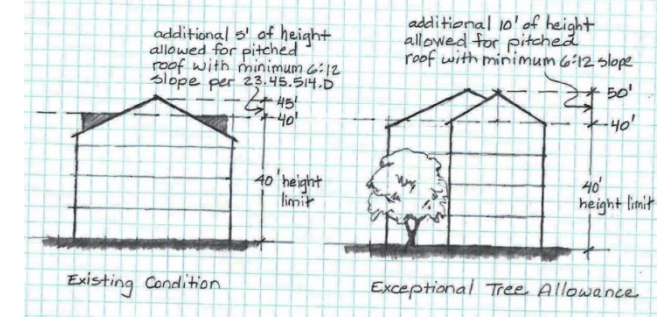
Land Use Tools: Zoning

- Additional zoning tools:
 - Screening and landscaping
 - Variances (density clustering or bonusing)
 - Comprehensive development

Setback encroachment



Increased height encroachment



**Seattle exceptional tree ordinance:
recovery of development potential**



Land Use Tools: Subdivision + Servicing



Providing space to plant trees on public and private land:

- Boulevard widths
- Soil volume
- Tree planting
- Drainage and infiltration



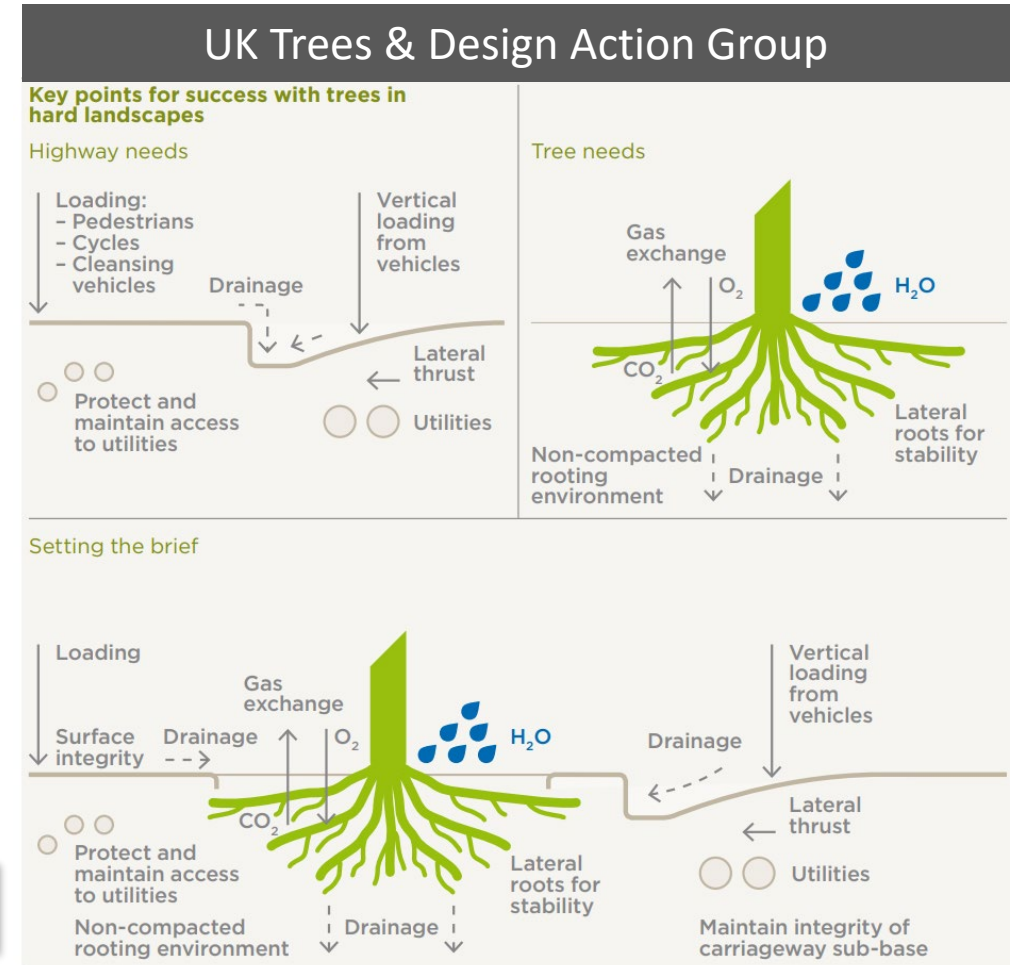
Land Use Tools: Subdivision + Servicing



Providing space to plant trees on public and private land:

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- Soil volume
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Successful trees in hardscape



Tools Regulating Trees



- Tools include:
 - Environmental Development Permits Areas
 - Covenants
 - Tree bylaws
- Components are:
 - A must
 - Recommended
 - Additional options



Tools Regulating Trees: Tree Bylaws



- Definitions
- Exemptions
- Prohibitions
- Permitted Removal Reasons
- Permit Application Information Requirements
- Requirements and Incentives for Tree Retention and Replacement
- Replacement Tree Planting Standards
- Actions on Site
- Securities
- Penalties

Tools Regulating Trees: Tree Bylaws



- Definitions
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- Permit Application Information
- **Requirements and Incentives**
- Replacement Tree Planting Standards
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Replacement tree requirements

1

MUST HAVE: Replacement ratio

A replacement ratio can be consistently applied to require that each tree removed is replaced. This approach would require applicants to replace every protected tree removed with one or more replacement trees.

- Option 1: **1:1 or 2:1 replacement ratio**
- Option 2: **1:many replacement ratios based on diameter of tree removed**

2

MUST HAVE: Minimum Target

A target can be measured and consistently applied to each property. There are two main approaches to growing tree canopy using tree bylaws in Canada and tree ordinances in the United States:

- Option 1: **Tree density target**
- Option 2: **Canopy cover target**

Tools Regulating Trees: Tree Bylaws



- Definitions
- Exemptions
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- **Replacement Tree Planting Standards**
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Soil volume requirements		
BEST PRACTICE TO CALCULATE SOIL VOLUME		
TREE SIZE	Min soil volume (m ³) ⁴	Shared or irrigated soil volume (m ³)
Small tree canopy spread is up to 6 m	8	6
Medium tree canopy - spread is up to 10.0 m	20	15
Large tree canopy - spread is greater than 10.0 m	35	30

Credit soil volume according to actual content of soil:

- Soil: Volume of soil (Length x Width x Depth)
- Soil cells: Volume of soil cell installation (Length x Width x Depth) x 0.92
- Structural soil: Volume of structural soil (Length x Width x Depth) x 0.2

⁴0.3 m³ minimum soil per 1 m² of crown projection based on Lindsey and Bassuk (1990).

Selecting the Right Tools



- Selecting the right tools and options



- Community context
- Institutional framework
- Actors and coalitions
- Processes

- Implementation criteria for effective tree bylaws

1. Clearly stated goals
2. Designated responsibility
3. Performance standards
4. Flexibility
5. Enforcement
6. Comprehensive management strategy
7. Developed with community support



Thank you!

