

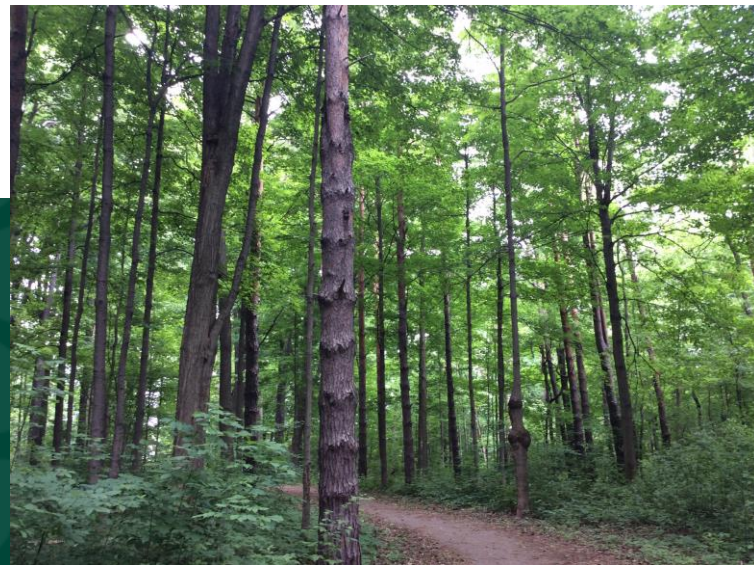


London  
CANADA

# Levels of Service for Urban Woodlands

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[london.ca](http://london.ca)



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# What is our “Level of Service”?



Qualitative measure (with quantifiable indicators) - like rating a hotel!

5: Excellent

4: Good

3: Fair

2: Poor

1: Very poor

Choose your “Good Enough” Level of Service for community needs, expectations  
– typically 3 or 4



# Manage For Public/Visitor Experience

Do they know it's there?

How far?

Can you park? Transit?

Is it accessible?

How is it used? How should it be used?

Is there enough of it to satisfy competing demands? Eg. bikes



Does it appeal to sensory perceptions  
(sight; touch; smell; sound; taste)?





# 10 Service Attributes Measured

- 1. Scarcity** Score higher for woodlands closer to others by walking route (that's the goal)
- 2. Recreational/Human Health Opps** Walking, running, yoga, wildlife?
- 3. Landscape, Topography** Blink, and miss it?
- 4. Aesthetics** Is it pleasant? Scary? Dark?
- 5. Access and interaction for humans** Accessible? Obvious trailhead?
- 6. Cultural/historic association** Pre-1950? Person, event?
- 7. Connectivity** Where do the trails go?
- 8. Structural Diversity** Optimal age, size classes
- 9. Biodiversity** No. of tree species? Invasives?
- 10. Operational Access** Walk in only? Aerial access?



# 2 steps for control of bias or influence

## 1. Influence from Size of Asset

### **Categorize Assets by Size (Area)**

Q: Do you lump close-spaced woodlands together? Or split?

Very small woodlands score poorly but are not usually our highest priority

e.g.	Very small 0.25 – 0.5ha	Small >0.5 – 1.0ha	Medium >1.0 – 5.0ha
	Large >5.0 – 25.0ha	Extra large >25 ha	

## 2. Influence from Size of Asset and Observer Subjectivity

### **Prescribe % weighting for each Attribute, in each Size category**

e.g. 30% for structural diversity, 30% for biodiversity, + other attributes to 100%

Arguing lower or higher scores and observer subjectivity may serve little purpose!

Half-points are okay!

**Calculate (score x weighting %) and add products together**



# Example: Structural Diversity

**Score**

**Indicator**

- 1 No structural diversity; all the same age/size class
- 2 Some diversity - two age or size classes
- 3 More than 2 size/age classes present
- 4 All size/age classes present but distribution not desirable for the eco-type
- 5 Appropriate distribution of size and age classes for the eco-type

x Weighting 30% (example)



# Example: Biodiversity

Score	Indicator (do not have to match everything)
1	Dominated by invasives (80% or greater); no natural regeneration
2	Strongly influenced by invasives; natural regeneration, but it may be damaged
3	Invasives < 40%; 5 or fewer tree species; some native/desirable regeneration
4	Few or no invasives; 6 to 14 tree species present; Species At Risk habitat may be present but no Species At Risk known
5	Sparse to nil invasives; 15 or more tree species present; Species At Risk habitat and presence

x Weighting 30% (example)



# “Level of Service” Asset Management Tool

1. Select your “Good Enough” indicator for each Attribute in each Size Category
2. Calculate “Good Enough” score x prescribed weighting (which also varies with Size Category)

**This is the target or threshold minimum goal for acceptable LoS**

City of London: 3 to 4.55 out of 5; highest target in largest Size

## Asset scores **lower?**

Improve management, and/or add \$\$ for one or more Attributes to achieve required Level of Service

Very low score may indicate woodland that is unsustainable, unlikely to succeed, no matter how much is invested





Medium Size 1 - 5 ha:

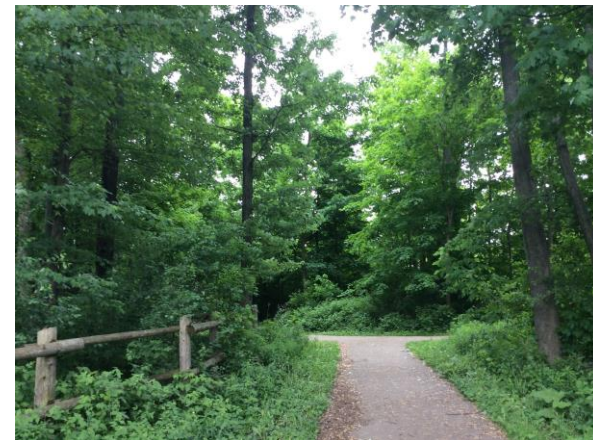
Target 3.07



Marr Drain: 2.17



North Mud Creek: 3.12



Forest View Park: 4.24



Large Size 5 - 25 ha

Target 3.65



Kiwanis Park Central South: 3.10



Pottersburg Park: 3.10

Service Attribute Measured	1	2	Customer LOS Quality Rating Scale	3	4	5	Weighting	Customer LOS Target
Scarcity	Greater than 2 km from another city owned woodlot OR any city owned woodlot within 2 km is only category 1 for social access	2 km from another city owned woodlot meeting at least a category 2 for social access	1500 m from another city owned woodlot meeting at least a category 2 for social access	1000m from another city owned woodlot meeting at least a category 2 for social access	500 m from another city owned woodlot meeting at least a category 2 for social access	2.4%	3	
Recreational/Human Health Opportunities	<p>Not inviting.</p> <p>Limited or no recreational opportunities.</p> <p>No managed trails or trails that are derelict to the point of becoming non-functional.</p> <p>No obvious management.</p> <p>Anti-social. Discouragement of popular enjoyment. e.g. "Party Pits", garbage, needles/sharps, encroachments, dumping, vandalism</p>	<p>Not very inviting.</p> <p>Basic walking trails created and managed by the City, without amenities or with poorly managed amenities e.g. overflowing garbage containers, broken benches, broken fences</p> <p>Frequent seasonal puddles or mud on trails</p>	<p>Inviting.</p> <p>Seasonally-managed trails with appropriate amenities managed for the site e.g. garbage containers, managed consistently during the season Dog poop bag dispenser with supplies in season Seasonal signage Benches are clean, in adequate repair Fences in reasonable repair Persons with disabilities may use the site - but it may not provide a high level of enjoyment</p> <p>Pond, stream, springs in season do not detract from the visitor experience; mud and puddles on managed trails are limited</p>	<p>Very inviting.</p> <p>Winter maintained trails with well-managed amenities appropriate to the site If there is a need for repair, this is isolated and not widespread</p> <p>*Specific elements to enhance enjoyment or safety of persons with disabilities e.g. visual/tactile contrast along trails and at transitions like steps; benches sited with a pleasing view; appropriate sounds, smells</p> <p>Pleasant pond, lake, river landscape, if present, adds to visitor experience</p> <p>No mud or puddles</p>	<p>Very inviting at all times of year.</p> <p>**Provides pleasant and safe year-round enjoyment by persons with disabilities, with consideration of sensory perception (sight, sound, smell, touch)</p> <p>Includes 3+ other recreational themes/elements: cycling, walking/hiking; nature appreciation; attractive woodland landscape; vista or viewpoint; non-turbulent water; cross-country skiing; snow-shoeing; opportunity for solitude (without being unsafe)</p> <p>High quality management: interpretive signage; trail markers; benches with pleasing views; self-guided trails: highly visible to the public</p>	7.2%	3	
landscape (and topography)	Only visible by houses immediately next to it, not the passer-by Landscape is not noticeable e.g. seedlings only or 'blink and you miss it'	Noticeable, but not dominant or dramatic. Partly visible Has attained free to grow stage	Landscape is noticeable to the passer-by Has contrast or drama by association with other landscapes	Dominant and dramatic landscape feature Readily seen from many vantage points Has achieved primary function Promotes relaxation	Remarkable and dramatic in association with other landscapes Depth of view penetration into	2.4%	3	
Aesthetics	Ugly Dank, dark, scary place No surveillance or surveilled only by adjacent properties, from windows No visual penetration of woodland	May feel uneasy in some parts Limited visual penetration of woodland Surveillance by adjacent properties, from windows No personal space	Not scary to walk through - but not relaxing either May be surveilled but overall there is some sense of solitude and personal space	May be busy, but persons can find their own space Surveillance is largely promoted by visual penetration of woodland	Can find own space. Pleasant and peaceful, beautiful, relaxing. Spacious, uncrowded	4.8%	3	
Access and interaction for humans	<b>No managed trail.</b> No parking within 100 m AND No public transit stop within 800 m	Accessible with challenging sections >3% grade Paid parking or parking only at some times of day within 100 m of access	Accessible by most persons; no wheelchair access Has one space where people may stop and chat e.g. clearing, glade, viewpoint Woodland that existed prior to 1950	Accessible with paved section; partly accessible by wheelchair but not fully A few clearings, glades, viewpoints, etc	Accessible including wheelchair access Woodland gathering place; several clearings, glades, viewpoints	7.2%	2	
Cultural/historic association	Artificially created woodland/afforestation of the modern era (post-1950) with no known association to an event, place or person etc.	Artificially-created woodland (naturalisation, reforestation, plantation) from any era If created in modern era (post-1950), it is associated meaningfully with something/someone	No known associations; OR Association is suspected but unexplained No interpretive signage	Woodland existed prior to 1950 Local folklore connection or association, may be anecdotal or unproven Interpretive signage may be present	Woodland existed prior to 1950 We feel like we are the Forest City when we think about the woodland Documented, substantiated association to a place, thing, event or person	1.2%	2	
Connectivity	<b>No connectivity</b>	<b>One entrance to a dead end, there and back</b>	<b>Loop trail, steps do not have to be re-traced</b>	Interconnecting paths or trails offering multiple entries/exits to the Park or neighbourhood	Multiple entrances/exits and choices **School, shopping or other	4.8%	2	
Structural Diversity of Woodland	No structural diversity; all the same age/size class	Some diversity - two age or size classes	More than 2 size/age classes present	All size and age classes present but distribution is not desirable for the eco type	Appropriate distribution of size and age classes for the eco type	30.0%	3	
Biodiversity of Woodland	Dominated by invasives (80% or greater by stem count or area)	Strongly influenced by invasives (40% or greater by stem count or area)	Invasives less than 40% by stem count or area	Few or no invasives present Adequate floral/faunal/fungal groups	Sparse to nil invasives Floral/faunal/fungal groups to sustain	30.0%	4	



# In Review – 2017 to date

- Requires little training of observer – need basic knowledge of plant ID
- Controls subjective scores by different observers
- Useful tool for prioritizing management
- May need refinement - but little has changed so far
- Quick, easy, cheap to repeat for measuring success

**Your Comments, Suggestions, Questions?**