Making Sense of Supply Restrictions

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Expanding and Diversifying Housing:
Approaches and Impacts on Opportunity

Roadmap

- General thoughts on supply constraints and housing supply/prices
- Estimation of negative spillover of density
  - Does density lower the value of nearby single family housing

Supply Constraint Mechanisms

- Strict limit on holding capacity of land
  - 5 units per acre SF zoning = 5 households per acre
    - "Drive to qualify"
- Development costs
  - Types
    - Strict $ costs
    - Uncertainty - raise needed return
    - Time
  - Operate via lower developer bids for land
    - Fewer landowners sell at particular time/place
    - Less development occurs because of land supply
    - More acute when assembly is required - premium to force sale

Problem with Regulations - Price Connection

- Inelastic supply/regulations/supply confusion
  - Supply inelasticity is tied to attraction of intra-urban locations (Mayer & Somerville 2000)
  - Regulations are hard to separate from amenities (Davidoff 2016)
- Growing out vs up
  - US studies focus on SF homes at urban fringe
    - Great for featureless city (Dallas?)
  - In high amenity / high price cities - challenge is redevelopment of existing sites

Zoning Motivation w/ Redevelopment

- Loosen zoning = landowner financial gains
- Why restrict?
  - Negative externalities of density
  - Preferences / exclusion: snob / racism
- Research question: what is the size of negative externalities of density?

Comment on Literature

- Strange (1991) -theory effects
  - Within neighbourhood - negative spillovers
  - Across neighbourhoods - trigger rezoning elsewhere

- Turner, Haughwout, and van der Klaauw (2014)
  - Own benefit of more intensive use
  - Negative effect of intensive use on neighbours
  - Aggregate supply effects

Use Vancouver Laneway Policy as Test

- What: infill unit allowed in single family zones
  - Rental only unit
  - 600-900 sq ft
  - 1-2 bedrooms

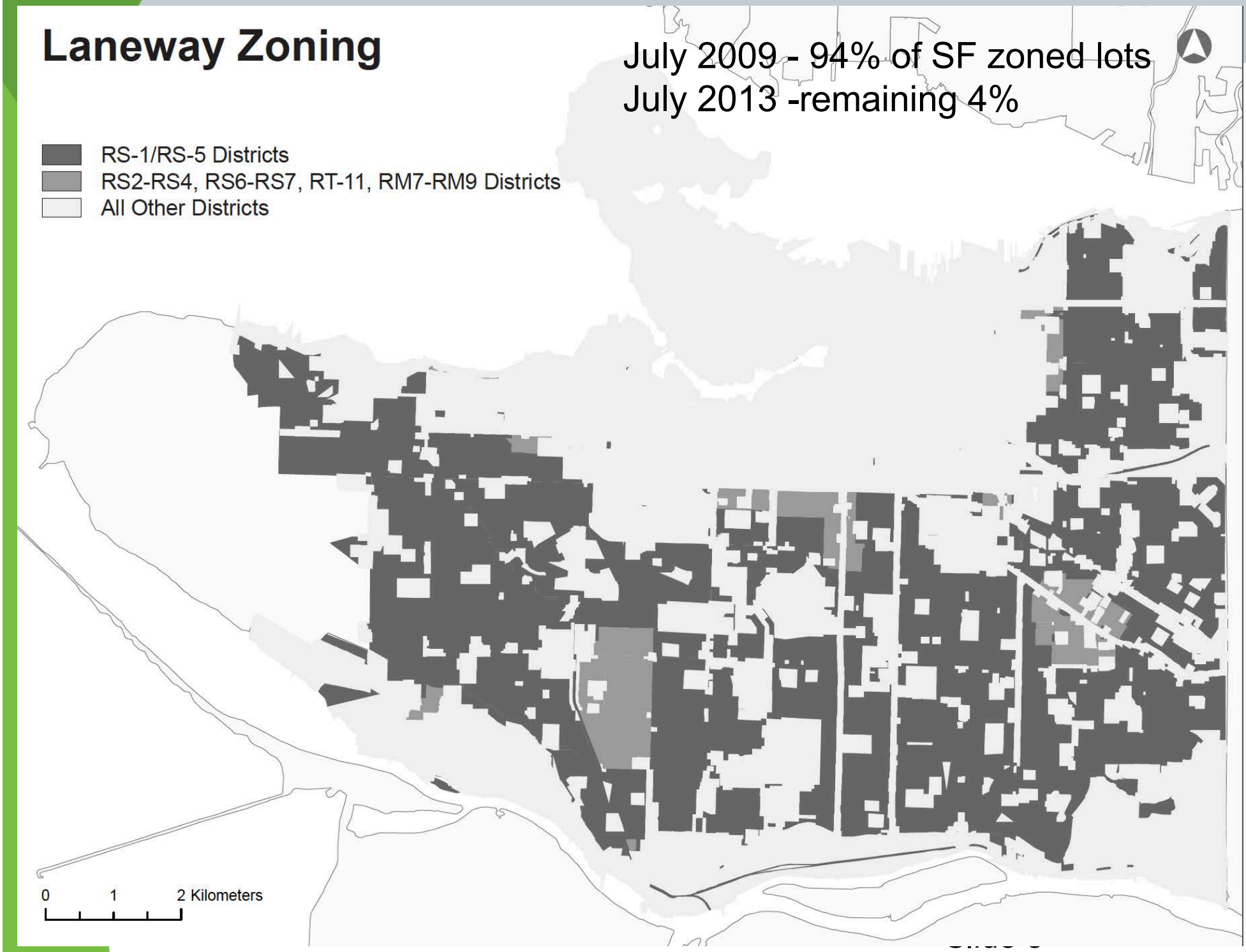
- Purpose

This report on laneway housing (LWH) is one of a number of initiatives that involve zoning amendments to further Council priorities on Affordable Housing and Sustainability, as well as directions contained in the EcoDensity initial actions. In addition to LWH, Council has

means to co-locate with close family members (e.g. elderly parents) or caregivers. They provide greater flexibility, affordability, and long-term sustainability in the city's housing stock, and do so in a manner which provides little or no visible change in existing neighbourhoods.

Laneway Zoning

July 2009 - 94% of SF zoned lots
July 2013 -remaining 4%

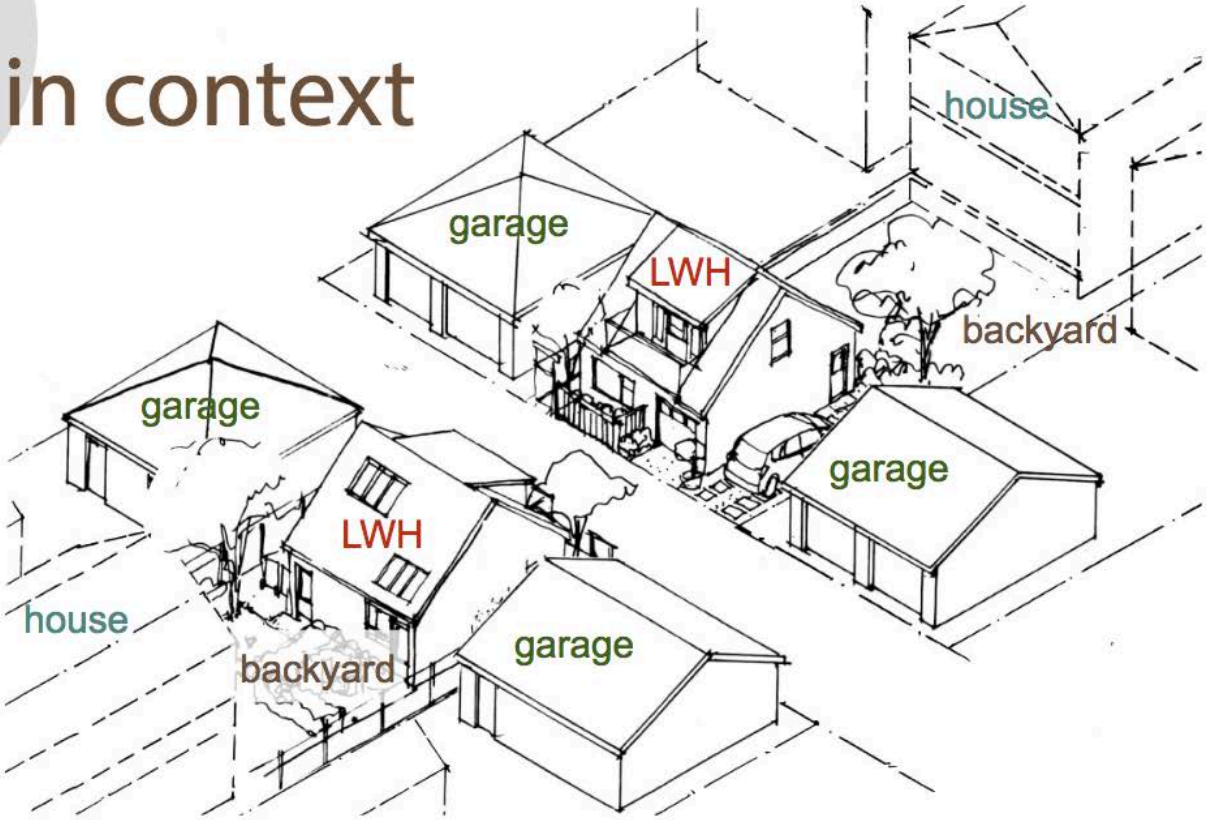


Laneway – Infill Density

Laneway vs Garage

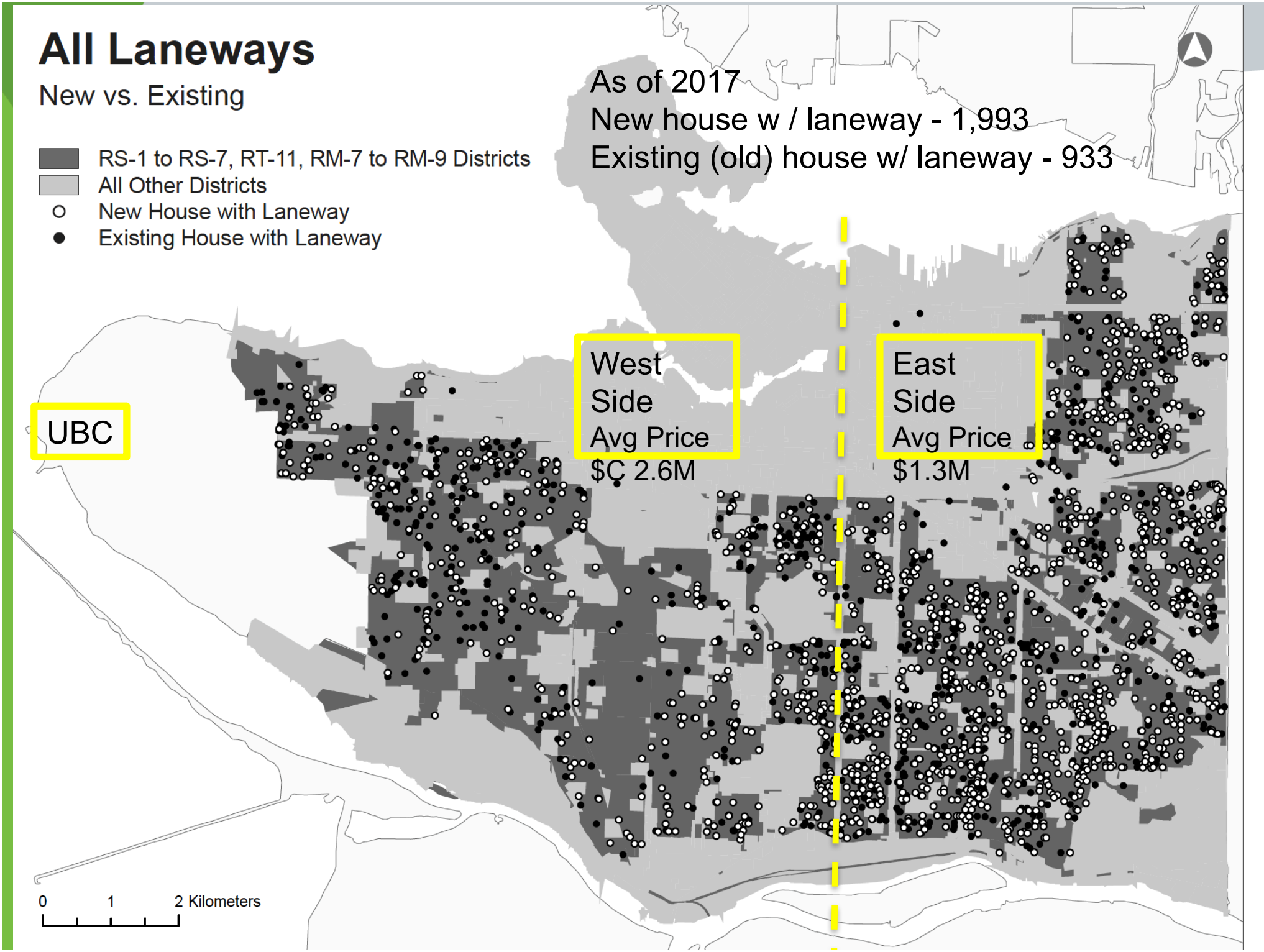
In Context: Garage vs Laneway

design in context



All Laneways

New vs. Existing




100 Meter Ring
W 22nd Ave
W 22nd Ave
Yukon St
Columbia St
W 23rd Ave
W 23rd Ave
Yukon St
Columbia St
Pharmasave
Health Centre
W King Edward Ave
W King Edward Ave

Effect - # of Laneways in 100m Ring

All laneways and 1-family counts, 100-meter ring

VARIABLES	(1) Full sample	(2) High pp	(3) Very high pp	(4) w10	(5) w25	(6) w50	(7) w75	(8) w90
No of laneways within 100m, excl. own	-0.006**	-0.013**	-0.022***	-0.001	0.001	-0.001	-0.005**	-0.012***
	(0.003)	(0.005)	(0.008)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)
No of 1-fam within 100m	0.001	0.001	0.001	0.000*	0.001***	0.001**	0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Observations	20,920	9,782	4,451	20,920	20,920	20,920	20,920	20,920
R-squared	0.700	0.553	0.440	0.520	0.473	0.576	0.764	0.833
neighbourhood/time effects + controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Effect- New Neighbouring Unit - w & w/o Laneway

Single-family neighbourhoods, new neighbours only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Full sample	High pp	Very high pp	w10	w25	w50	w75	w90
New neighbour has laneway	-0.028	-0.036	-0.089**	-0.023	-0.011	-0.027	-0.013	-0.069***
	(0.026)	(0.029)	(0.038)	(0.024)	(0.020)	(0.018)	(0.018)	(0.020)
Observations	1,330	878	488	1,330	1,330	1,330	1,330	1,330
R-squared	0.775	0.674	0.563	0.760	0.670	0.679	0.770	0.840
neighbourhood/time effects + controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Negative Spillovers?

- Test is limited
  - ***Very*** modest increase in density
  - Particular form / quality
  - But = 10% of new construction in data
- Conclusions
  - Mean effects can hide substantial heterogeneity
  - Owners of most expensive homes really don't like added density (different people)
  - Everybody else relatively unaffected