



# LANEWAY HOUSING BUILDER & DESIGNER WORKSHOP

## Workshop 1

Tuesday, January 30, 2018  
9:30 am - 12 noon  
Khalsa Diwan Sikh Temple  
8000 Ross Street

## Workshop 2

Thursday, February 1, 2018  
9:30 am - 12 noon  
Vancouver City Hall,  
453 West 12th Avenue  
Townhall Meeting Room

## Introduction

The City of Vancouver introduced the Laneway House (LWH) program in 2009 to provide opportunities for more rental housing options in neighbourhoods across the city. The program has been very successful, with more than 3,000 permits for laneway houses issued to date.

Looking forward, the Housing Vancouver Strategy (2018-2027) contains new targets to ensure our city has the right supply of homes, including a diversity of rental and ground-oriented housing. A target has been set for 4,000 new laneway houses to be built over the next 10 years.

As part of achieving this goal, the City brought together laneway housing builders, designers and architects in two workshops to draw on their first-hand experience. Staff provided an overview presentation on the 10 years of laneway experience at the City and highlighted how laneway homes are part of the Vancouver Housing Strategy to deliver more rental housing.

Through table discussions workshop participants shared what they identified as issues and challenges with the laneway program and identified key areas for change. Participants were encouraged to share innovations they have developed in the construction of laneways or which could be considered in the future. Builders and designers were also asked to complete an individual survey to identify top issues and ideas for change.

In addition to these workshops, City staff are conducting an evaluation of the livability of laneways built to date, trends in laneway design and a survey of laneway owners and occupants to identify challenges to building a laneway and resident satisfaction. The input received and lessons learned from these activities will be used to make changes to the existing laneway program to make it easier and less expensive to build laneway houses.

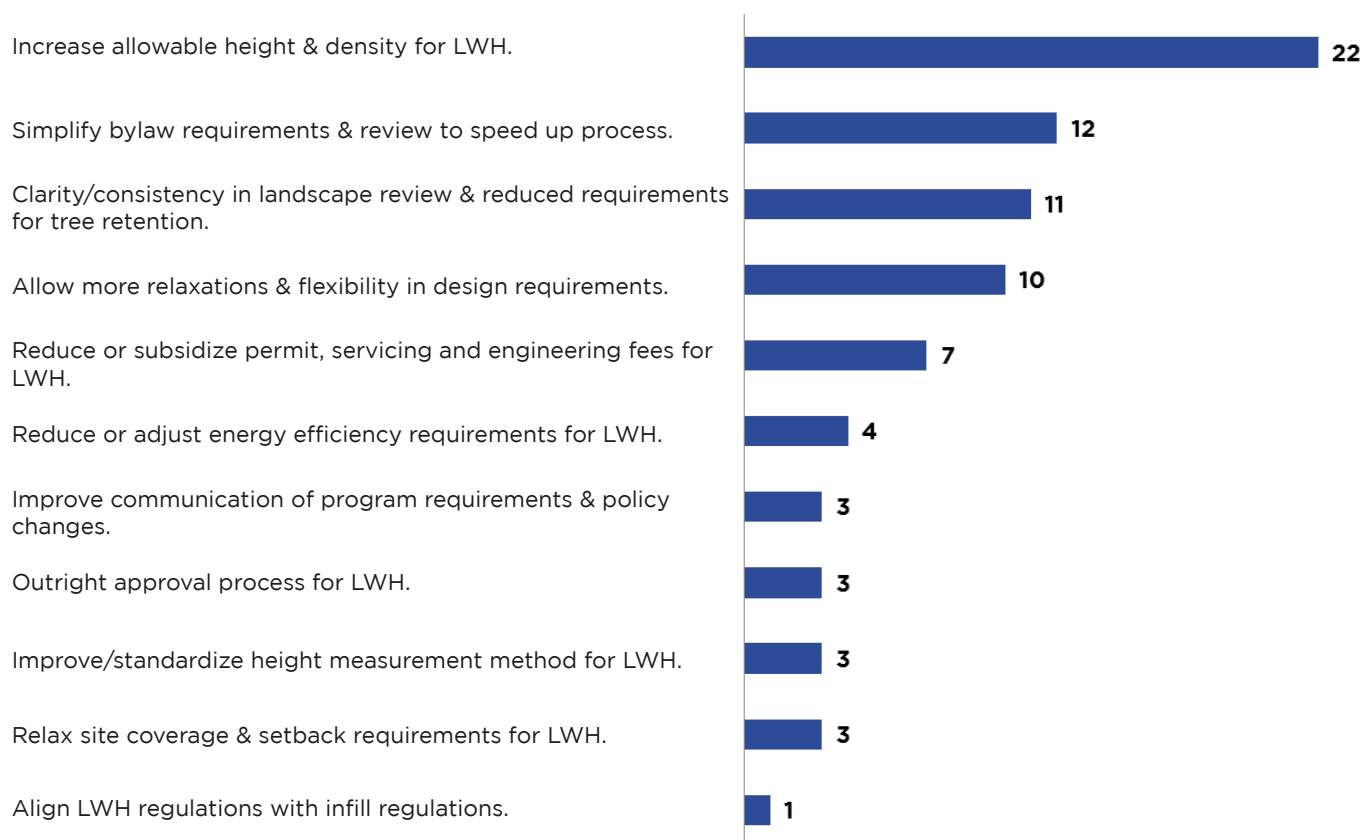
This summary document identifies key themes and priority actions put forward by workshop participants followed by detailed workshop notes on challenges and opportunities in creating laneways.

Workshop 1: 14 participants  
Workshop 2: 33 participants

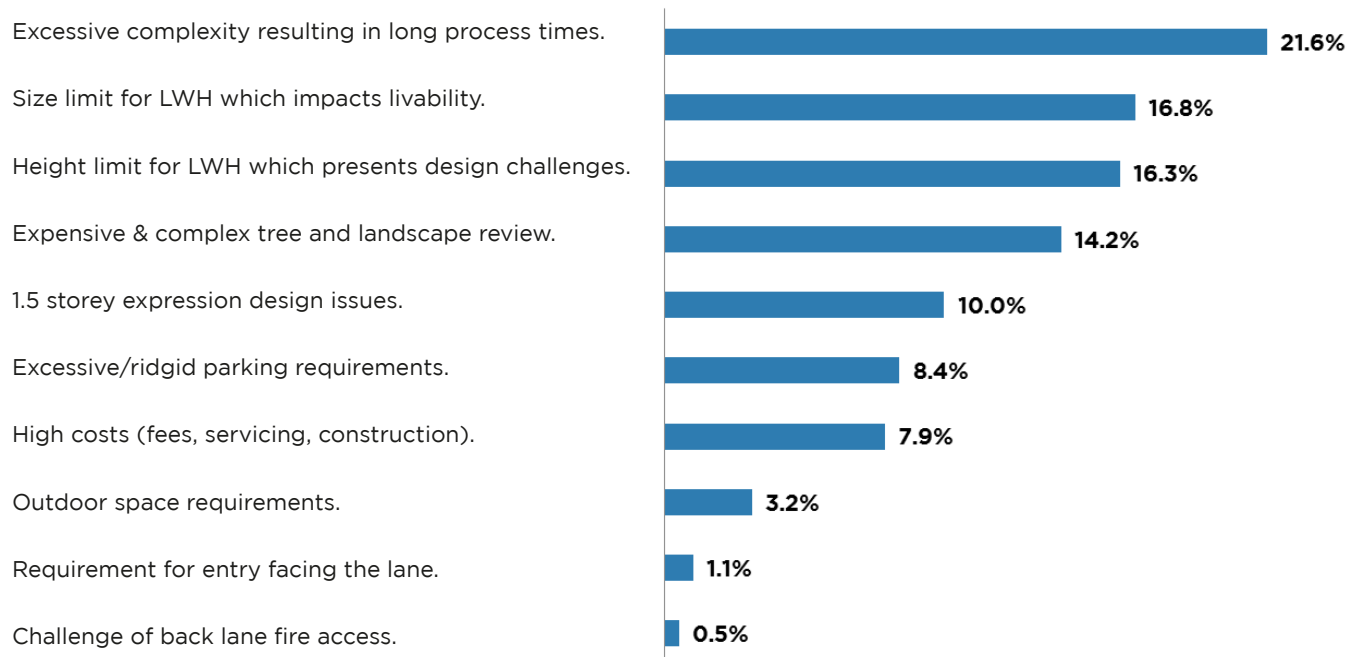
## Key Themes From Table Discussions

- Initial laneway program regulations were created when this housing form was still relatively new and there was uncertainty as to how they would fit with the existing neighbourhood and impact adjacent properties. Now that the program is almost a decade old, this housing has been integrated into most neighbourhoods and the industry is able to deliver products which are familiar and widely accepted by the public.
- General feeling that LWH requirements and regulation have become overly onerous and complex. Given the maturity of the sector, the City should re-visit the initial assumptions which informed these regulations and focus on those key issues which really matter to the City when making changes to the laneway program.
- The length of the review process directly impacts the cost to build LWH, so the City should look for ways to move towards an outright approval process for LWH while maintaining quality control through thoughtfully designed polices and regulations.
- There is a need to reconcile other City priorities and policies (e.g. new energy efficiency policies and tree retention) with LWH and decide what is most important.
- Landscape review and the requirement for a professional arborist report were consistently cited as a source of frustration and a pinch point in the processing and review process which held up projects. Participants want the City to clarify and streamline this process to provide more certainty for builders and their clients.
- Additional relaxations and more flexibility in design should be introduced to help LWH builders adapt to site-specific challenges. More flexibility would result in the integration of other citywide priorities with more livable units.
- Allowing for minimal additional height (~2ft) is a quick and easy change which would reduce the design challenges and simplify construction of LWH while having minimal impact on adjacent properties.

## What is the most important change the City should make to the Laneway Housing Program?



## What are the top challenges that should be prioritized for quick action?



## Challenges and Solutions

Participants were asked to identify and prioritize key challenges in the creation of laneways and to propose solutions to those challenges that they are already implementing or would like to see in the future.

### Outdoor Space

#### Challenges:

- Other requirements for height, size, setbacks etc. create challenges in finding/creating space for outdoor space.
- There is confusion over what type of outdoor space is required - back yard patio, balcony.

#### Solutions:

- Place more emphasis on high quality landscaping while allowing for flexibility in the 16ft minimum separation requirement between the LWH and the main house.
- Remove the requirement for outdoor space as most clients want this space anyway but it would be at the discretion of the builder/designer as to location, size etc.
- Allow for smaller patios on smaller lots.

## Height Limit

### Challenges:

- Most LWH have to be below grade to accommodate the maximum height limits and VBBL requires insulation for the foundation wall, creating thicker walls and taking up floor area.
- 20' height limit is too short, we usually sink the building into the ground ~18" in order to do a properly insulated roof and to have decently high ceilings.
- Spring height regulation is pushing LWH to below grade.
- Height limit is particularly challenging on sloped sites; need to sink foundation results in retaining walls, extra grading, insulation etc. which also adds to the overall cost.
- Impacts headroom of interior living space; exacerbated when accommodating R50 batt insulation thickness in roof assembly.
- Height is measured to the ridge which greatly benefits modern shed roof style, but is a disadvantage to fit into a heritage style.

### Solutions:

- Increase the height limit by 2ft to 5ft so the first floor is above grade and can avoid VBBL insulation requirements or do not count setback and floor area for exterior insulation for the foundation wall.
- Maximum height should be raised to at least 22' and a thermal exclusion for roofs should be allowed.
- Allow for stepped height on sloped sites.
- For a flat site keep the 20ft height maximum, for sites with >10% slope allow height relaxation to 22ft. (results in flooding mitigation and matches neighbouring properties).
- Slab on grade to reduce insulation requirement for the foundation wall.
- Increasing height limit could create potential for more flexible spaces and small accessory dwelling units.
- Allow for 2 storey expression option if interior parking or a carport is provided.
- Relax spring height for pitched roofs.
- Increase the height limit to 25ft or to allow for 8ft floor to ceiling height.
- Allow height relaxation for pitch roofs to encourage character roof line.

## Size Limit

### Challenges:

- Existing 40sf storage exclusion is difficult to achieve in the given space as there is a requirement for the storage to be framed in.
- VBBL adaptable housing requirements are challenging to achieve in LWH due to size limit (of both upper and lower floors), a 1.5 storey LWH is not truly accessible.
- Size limit is impacted by thickness of insulation which further reduces interior living space.
- A 1 storey LWH cannot maximize allowable FSR due to site coverage and setback requirements.
- Size limit of ~1,000sf prevents creation of three bedroom units for families which are needed citywide.
- Many clients would like basements but are unwilling to reduce floor area as basement area is not excluded; acknowledged that allowing basements will not help with costs (need for pumping, foundation walls, stairs).

### Solutions:

- Increase allowable FSR in LWH to be more reflective or equal to infill housing potential (1,200sf to 1,400sf to accommodate larger families).
- Increase allowable FSR by 1% (0.17).
- Look at adaptability and accessibility over the whole site rather than each dwelling; could result in the main housing achieving AAA but not the LWH.
- Accessible housing guidelines should be relaxed or more flexible, could include options such as:
  - Minimum of 1 bathroom and 1 bedroom are accessible.
  - No requirements on upper floor.
  - Overall % requirement for the entire site with access requirements in terms of ramps.
- Allow for flexibility in requirements based on site-specific criteria/challenges.
- Increase FSR for thermal exclusion above existing 3% of floor area for LWH.
- Provide for an extra 1' to 2' to remove the foundation wall stub.
- Create an FSR cap for the entire site at 0.86, old & new to create an incentive to retain.
- Exclude basement floor area (as is done in West Vancouver and New Westminster).
- Provide storage exclusion for a wider range of storage types (e.g. built in shelves).
- Allow for smaller front yards to help with siting of LWH in back.
- Incorporate overhang to create entry cover results in building with a different form with more character.
- Give density bonus for LWH as “low cost housing” as is done for “character”, “heritage” etc.

## Trees & Landscape Review

### Challenges:

- There can be conflicts between keeping trees on site and building footprint.
- Requirement for a professional arborist report adds time and cost to the process.
- Frustration as many participants experienced cases where staff provided direction contradicting arborist report, therefore why is it required?
- It is not clear when there will be direction to remove or protect a tree.
- Need for clear priorities – is it homes or trees?
- It is unfair to require one house on a block to retain a particularly large tree as it reduces or eliminates the option to redevelop.
- Instances where LWH projects have been cancelled because of tree retention.
- The landscape review takes too long and is too restrictive but there is no quality control or inspection on site, therefore it is an unsuccessful regulation.
- Most people change or ignore landscape plans anyways so the review is a waste of resources.

### Solutions:

- Remove the landscape review from the process.
- Bring the landscape review to the beginning of the process to address issues early; include landscape staff in pre-application meetings.
- Need for better coordination between review groups and consistency in direction provided.
- Allow tree removal if the tree is within the envelope without discretionary decision.
- Allow for more flexibility in tree removal as Richmond currently does.
- Ease up on tree retention requirements if the goal is to enable new housing.
- Relax setback requirement to accommodate tree retention.
- Allow for flexibility in design for cases where tree retention is required (e.g. overhang to protect roots).
- Provide incentives for tree retention if that is identified as an important benefit to the city.

## Energy Efficiency

### Challenges:

- It is difficult to achieve passive house in LWH as three people in a 600 sf LWH can over-heat.

### Solutions:

- Adjust insulation and PHPP modelling according to occupancy.
- Allow for R-value relaxation for LWH as they are already a more energy efficient form of housing given their small footprint.
- Consider net zero energy housing for LWH design.
- Allow for a different standard for air tightness rather than 3.5 ACH as it is harder for small homes to achieve.
- Allow for R12 RiGio insulation (3”) for LWH rather than R28 insulation to foundation wall (8”) as this reduces interior living space.

## Process Time & Complexity

### Challenges:

- Current processing times are too long which impacts project feasibility and affordability.
- The requirement for a non-stratification covenant adds a lot of time to the process.
- There is a lack of consistency in staff technical interpretation (among plan checkers, plan checkers and planner).
- Regulatory restrictions are increasing all the time, creating confusion and delays in projects.
- There is a lack of consistency in timing and review process for applicants.
- 6 month time frame for LWH permit is sometimes not long enough to get the main house permit before expiry.
- Outright rules versus conditional guidelines create confusion for applicants and are highly dependent on staff interpretation; many design issues are resolved on a case by case basis.

### Solutions:

- Have one permit for constructing a new single family house and LWH rather than a separate permit of each, or link the two so they move through the system in tandem.
- Create outright stream for all LWH with external design regulations for quality control.
- Simplify current by-law regulations for LWH to only those key aspects that the City cares about – stick to the KISS principle (keep it simple...)
- Hire more staff dedicated to review process.
- Enhance tools to help clarify bylaw requirements (e.g. explanatory notes or guides/“cheatsheet” with graphics); this would also help improve consistency in the review process.
- Develop process for communicating policy changes and updates to industry and integrating these changes in a timely manner into “how-to-guides”.
- Create an online LWH forum to get connect LWH industry and facilitate discussions and advice to resolve issues (i.e. a reddit for building LWH in Vancouver).
- Stop requiring a non-stratification covenant when building a new house and LWH together; strata LWH should be allowed everywhere.
- Set a time limit for review time if a builder completes a checklist specified by the City - standard form with room to clarify any assumptions made in calculations, design etc.
- Review approach should be based on a more simple matrix - e.g. look at overall massing and use simple tools like acetate overlay to judge massing.

## Costs

### *Challenges:*

- Increasing construction costs in general impact the viability and affordability of LWH.
- LWH pay twice as much per square foot as any other house or condo development in the city.
- Estimated that costs for sewer/water connections and building permit fees currently total ~\$30k - \$40k.
- Costs of building a LWH are closely tied to long processing times.

### *Solutions:*

- Target reducing current connection costs and fees by half.
- Lower engineering connection fees.
- Reduce permit fees for LWH to below other housing types.
- Introduce servicing cost exemptions for accessory dwelling units.
- Allow service connections to the main house for “tiny” category of LWH.
- Relax requirements for energy efficient windows and doors to reduce construction costs.
- Relaxation of utility upgrades; potential to share costs with a % to owner and % to city when utility is located on city property.
- Introduce a payment plan or ability to defer utility/servicing costs and permit fees to address the affordability of building LWH.
- Reduce City fees for adding a LWH to lots with an existing single family house if the desire is to encourage LWH construction independent of building a new main house.
- Use funds from the Housing Affordability plan to reduce the cost of upgrading the site infrastructure via a grant tied to a limit on rental rates for the LWH.



## Siting Requirements & Access

### *Challenges:*

- Current requirement for a permeable setback from the lane creates challenges on sites with a large main house.
- It is difficult for firefighting access to the back lane.
- Lanes are service corridors with many uses, having an entrance exposed to the lane is not what residents/clients want for both privacy and safety issues.

### *Solutions:*

- Reduce or eliminate the setback from lane (New Westminster has done similar) or allow relaxations on sites challenged by a large main house.
- Remove the 26' from lane setback as it is too constricting; keep site coverage and main house separation.
- Allow LWH on lots without lane; entrance to LWH could be achieved through side yard from the front of the main house and fire access and servicing are already done through the front.
- Rather than the 16ft separation requirement between LWH and main house, allow flexibility between different sites but making the separation requirement a percentage of site depth.
- Allow basement of the main house to open into the front yard; many sites have the LWH, basement suite and main house all trying to share a tiny backyard while the front yard is an unused formal space.
- Have been creating more LWH with entrances from sideyard and incorporating additional landscaping/fencing to deal with concerns over safety from lane.
- Improve lane quality - light, surfacing etc.

## 1.5 Storey Expression

### *Challenges:*

- It is recognized that the intent of the partial upper storey was important for neighbourliness in terms of fit and shadow impacts, however with greater acceptance of LWH forms can this shift?
- Unintended consequence is that garages become living space due to an unusable 2<sup>nd</sup> floor.
- VBBL requirements (e.g. for energy efficiency, adaptability) impact the livability of the upper floor.
- Partial upper floor requirement is a challenge for smaller lots which have limited building width to accommodate parking.
- 1 storey LWH is not preferred as it reduces the separation and outdoor space and there are no incentives (e.g. 1.5 storey LWH can get ~100 sf more for the under sloping roof area).
- Is there a need for a sideyard setback on the side including a parking spot?
- 60% of footprint requirement for upper floor makes it difficult to design livable inside space.
- Restrictions of the bylaw and guidelines means there is no room for creativity.

### *Solutions:*

- Gather public input on whether a 2 storey expression would be supported in neighbourhoods.
- Re-think existing limit of 60% of footprint for upper storey to allow a larger upper floor (e.g. 3/4 of footprint) or allow a 2 storey expression.
- Allow more flexibility for the second floor setback for flat roof.
- Create a training course for designers.
- Create incentives for 1 storey LWH.
- Reduce door width to 2'-6" on upper floor.
- Allow relaxations for building envelope requirements.
- Allow for all dormers to take up 50% to 70% of the building width.

## Parking

### *Challenges:*

- Placement of required one parking space interferes with secondary suite entranceways off the side yard.
- Smaller sites present a challenge in space for the required parking spot.
- Some feedback from LWH neighbours and owners is that the required 1 parking spot is not enough.
- Feeling that parking issues are localized and area-specific; areas with good transit do not need more parking as occupants are trending away from cars.

### *Solutions:*

- Invest in better transit across the city as experience has shown less demand for additional parking spaces when a LWH is located in an area well-served by transit options.
- Take a more nuanced approach to parking by linking requirements to location (transit, walkability, neighbourhood norms for more/less parking).
- If no parking space were required there is the opportunity for a larger side yard where parking would be to function as LWH yard/ outdoor space with entrance opening onto it.
- Allow alternate parking configurations such as tandem parking.
- Allow for carports – do support the 2013 move to get rid of ‘bonus’ square footage for garages to put cars outside.
- Allow height relaxation to allow for carport under LWH living space (could easily accommodate 3 parking spots).

## Innovation & Creative Approaches

Participants were invited to join conversations at different tables around innovation themes to discuss their potential for advancing the creation of laneways to make them easier, more livable and more affordable.

### **THEME:** LWH Templates/Prototypes

Idea: Explore current practices and investigate innovation in laneway design and construction methods to create a cost effective template for LWH that can be adapted to different sites and conditions.

- Create an outright plan that applies BC-wide with a standardized document format.
- Wave fees for LWH applications which make use of the template.
- Focus on a 1 storey LWH template as that is easiest to prototype and is more cost-efficient to build.

### **THEME:** Energy Efficiency/GHG emissions

Idea: Allow triplexes instead of defaulting to a house + suite + LWH. A LWH is an expensive and inefficient housing type that works really well with existing homes, but for total site rebuilds, a triplex would often work better.

Idea: Switch to a more performance based, whole-home performance (total energy use cap) approach to allow design and zoning setback flexibility. E.g. Specify a step in the BC Energy Step Code, or;

Relax height and side setbacks for LWH to accommodate thick walls and roof.

- Fixed prescriptive energy requirements are hard to work with in a small, restricted space.
- Insulation requirements for the roof (R50 for attic or R28 for sloped ceiling) are hard to fit under the current maximum height requirements.

### **THEME:** Bridging the gap between Laneway Houses and Tiny Homes

Idea: Allow micro LWH garage conversions that can tie into the existing homes sewer, water and power connections.

- Existing laneway regulations already allow for tiny laneways (205 sf).
- Tiny homes (trailers) cannot get a building permit so what is the smallest building that could be considered (either modular or site built).
- If tie-ins to existing services were allowed, micro LWH could be built for half the price of a typical LWH.
- Would also involve relaxing building code (e.g. insulation requirements).
- Need further exploration of the financial feasibility and connections costs.

**THEME:** Construction Techniques

Idea: Is modular construction a way to create more cost-efficient LWH faster than traditional building techniques?

- Important to understand difference between pre-fab construction and modular – latter is built in a factory, broken into a few parts and shipped to site for assembly.
- Factory has CSA approval to certify residential building is in compliance with building code.
- Modular can be designed to different sizes to fit a variety of lots (only difference is where you “cut” it in order to transport from factory). This is a key topic as moving a completely prefabricated building onto a lot through the lane is generally not possible.
- Need to change public perception that modular means shipping containers, this is not the case as the look and materials of modular LWH are the same as traditional builds.
- Assembly takes only a few weeks, this saves time contributing to less cost.
- There are few factories in BC that are currently certified – a challenge to growing the sector.
- Some dispute over actual costs of modular vs. traditional build requiring further investigation to clarify where potential cost savings are.
- Determining costs for modular depends on many factors (i.e. including servicing costs, considering site-specific issues, if cost is rolled up with the overall cost of building a new main house etc.)