

**CASE STUDY: PERMITS, DESIGN, ZONING: HOW LOCAL GOVERNMENTS
CAN HELP EXPAND MASS TIMBER CONSTRUCTION**

STUDY SHOWS HOW LOCAL GOVERNMENT REGULATIONS CAN SUPPORT MASS TIMBER



**CONSTRUCTION OF 1 LONSDALE AVENUE
PROJECT IN NORTH VANCOUVER, BC**

Source: naturallywood.com; Credit: KK Law

PROJECT OWNER: VANCOUVER

PROJECT LOCATION: SFU RENEWABLE CITIES, 580 W HASTINGS ST,
VANCOUVER, BC, CANADA V6B 1L6

COMPLETION DATE: JANUARY 17, 2023

WHILE EVERY AREA has its own unique conditions, British Columbia, Canada, offers examples of how other jurisdictions—and manufacturers, architects, and government officials—might adopt or evolve policies and practices that are more welcoming to mass timber buildings.

Research by the Renewable Cities program at Simon Fraser University (SFU) has found that local government approaches to mass timber construction play an essential role. The province of British Columbia helped fund the SFU study to explore and recommend ways local governments in the province can become more mass timber-friendly.

Renewable Cities in Vancouver, British Columbia, worked with a team of architects, developers, building officials, and other industry professionals to produce the study, “Building Capacity: Local Prefab Mass Timber Solutions.” It emphasizes 3 areas crucial to the success of mass timber: the building permit process, design guidelines, and zoning.

Building permits: One of mass timber’s greatest benefits is that it shortens construction timelines. Buildings get finished faster, meaning that they’re occupied sooner and developers have fewer interest payments. But if a city’s building permit process has not been modernized for off-site construction, that benefit—and maybe the project—is lost. Thus, updating that process, perhaps including the accommodation of digital submissions (e.g., Building Information



CLT PANEL DELIVERY AT 1 LONSDALE AVENUE PROJECT IN NORTH VANCOUVER, BC

Source: naturallywood.com; Credit: KK Law

Modeling [BIM]) and the issuance of partial permits is crucial to accommodate prefab construction.

Design guidelines: Mass timber comes with unusual structural considerations that influence the form and design of the building because it is more difficult, for example, to step floors and add balconies. It also has implications for design guidelines that were written with long-established construction methods and materials in mind (i.e., concrete and steel, constructed on-site). Jurisdictions need to update their design guidelines to accommodate mass timber's unusual structural considerations so as not to inadvertently penalize this building form. Mass timber buildings have thicker floor assemblies, for example, so revised height regulations that account for this minor increase in floor thickness would level the playing field.

Zoning: Zoning is also a crucial topic because, in British Columbia at least, high-density, 12-story buildings are not common. Local governments might not have official community plan categories

and zoning to address them. The report suggests that this is an opportunity for cities to develop a new, high-density, mid-rise land-use category or modify existing zones to better accommodate mid-rise mass timber that can provide the much in-demand middle housing. Without a dedicated mid-rise zone, 12-story mass timber buildings are at a competitive disadvantage because developers will pay more for the site for higher heights and densities using concrete construction.

Mid-rise mass timber building forms are coming to communities, and, just as the industry must innovate to keep up with building advancements, so should municipalities be prepared by changing land-use regulations and permitting processes—perhaps even building with mass timber themselves.

Mass timber construction carries benefits for many, and it will take many hands across the industry and across governments to build those benefits. 🌱