Mass Timber Costing in Canada

Summary of Consultation Insights

Sustainable Buildings Canada

July 2025

Introduction and Context

Sustainable Buildings Canada (SBC) has been contracted under Natural Resource Canada's GCWood program to develop a costing guide to Mass Timber (MT) construction versus incumbent materials, like concrete and steel. The focus of the study, which spans Spring 2025 to Spring 2026, is on residential construction of mass timber buildings spanning six to twelve storeys, which is a relatively new area of development in the Canadian building landscape.[1]

To help inform costing insights and the related context for mass timber development in Canada, a series of consultations and key expert interviews were conducted over April to July 2025. Over this period, one-hour interviews were held with **25 key market actors and experts** in mass timber projects and included builders, developers, structural designers, manufacturers, associations, insurers, and cost consultants (see **Appendix A** for the final consultation list).

Questions of interest covered areas around mass timber project opportunities and barriers, costing and financing considerations, and insurance (see **Appendix B for** general question list). Interview questions were tailored in consideration of the various perspectives being solicited.

The insights gained from these consultations are consolidated herein into the following general themes:

1. Project Trends in Canada
2. Insurance Considerations
3. Non-Costing Challenges & Considerations
4. Costs & Financing
5. Recommendations & Next Steps

Report Citation

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We are grateful to the experts and stakeholders who generously contributed their time and insights to the interview process.

We thank Adam Jones of SBC for his insights and guidance throughout the project process.

[1] Although this initiative is focused on the National Building Codes, as Ontario and B.C. have adopted heights to 18 storeys within their Provincial Building Codes there is some discussion around these buildings and jurisdictions included.

1. Project Trends in Canada

➢ **Materials currently used for Mass Timber (MT) include traditional framing to glulam and encapsulated cross-laminated timber (CLT)**

Per interviewees, the type of wood material employed in a project is height-dependent and chosen in accordance with the number of storeys being built, in that:

- For under 6 storeys, traditional wood framing hybrid structures are typically applied as pure wood framing is most cost-effective in the low-rise segment;
- For 6 to 12 stories, glulam and CLT for floors and cores are used,
- For 12 storeys and over, largely all wood structures with encapsulated CLT elevator cores are used.

Overall, to achieve 7-12 storeys (the height focus for the present study), CLT and glulam are essential materials. This particular market segment is very relevant to fostering mass timber deployment in Canada due to the overlap in the cost of systems (in that the cost of MT vs. more traditional materials is closer to parity). This means that decisions come down to granular and regional/site-specific tradeoffs in cost, timeline, and project context.[2] Consequently, the present focus for the residential mass timber industry is on 7 to 18 storey building projects.[3]

> *"There is a fuzzy overlap zone where either system could work—it's all about which one performs best for that project.*
>
> *"6–14 storeys are where MT competes best— [this segment is] not low enough for stick frame, [yet] not tall enough for concrete efficiency."*

➢ **Increasing project height can be key to making MT both scalable and cost-effective**

Interviewees note that once the project is above grade, the costs of parking and the foundation are essentially sunk, which makes building higher more optimal.

[2] For buildings 8–14 storeys, companies like Mattamy (which are not currently building any MT), would typically evaluate total precast or cast-in-place concrete to identify which offers better cycle time and schedule efficiencies.

[3] Note that buildings 7+ storeys face Part 3 building code requirements, and are significantly more complex than Part 9 (low-rise) (RESCON).

> *"If you're doing 6 storeys with a concrete parkade, you might as well keep going up—foundation costs are sunk."*

- **The materials used and approach to mass timber projects can vary regionally as well as locally**

In B.C., concrete floors and wood hybrids are more often applied, whereas in Ontario developers leverage hybrid CLT and framing.

Residential tall wood projects also are more common in B.C. than Ontario (and are typically institutional/government buildings). In B.C., carbon and environmental goals are strong drivers, whereas in Ontario, practicality and cost dominate decision-making, resulting in less appetite for innovation unless it is cost-competitive.

Locally, mass timber's lightweight structure can be a liability in high water table areas due to uplift pressure.

- **To date, there are few residential MT projects between 7–18 storeys in Canada**

Most Canadian mass timber experience is in the institutional/commercial project space (e.g., colleges, community centres, etc.). MT is typically used for projects that are more innovative or institutional in nature, as institutional players (who own and operate long-term) are more receptive to sustainability drivers and these benefits than condominium developers, who optimize for up-front sales and focus less on operational benefit.

As residential developers are generally slower adopters, existing mass timber projects in Canada are largely more boutique or mission-driven and associated with commercial or sustainability-focused portfolios.

> *"Residential mass timber is still rare - developers are cautious and uptake is limited."*

> *"Condos don't care about operations — that's where institutional interest comes in."*

- **Modular and offsite home solutions as well as factory-built homes continue to gain traction**

In terms of emerging trends, modular and offsite home solutions as well as factory-built homes continue to gain traction, and there is growing interest in demountable foundations and re-usable infrastructure as a form of innovative site management.

Companies like Nordic, a key supplier for the industry, are experiencing growing client interest in climate resilience, deconstruction, and material reuse, as design for disassembly is increasingly featuring in the business model (i.e. Design for Manufacturing, Assembly, and Disassembly, or DfMAD).

> *"[Our company] has an 'adaptive reuse' portfolio (brick-and-beam), and sees mass timber as "brick-and-beam 2.0."*

Text Box 1: Fire & Water

Concern about fire has led to requirements for water sprinklers being installed on a floor-by-floor basis during wood / mass timber construction projects.

Wood buildings require active fire sprinkler systems that are installed progressively as floors go up. Separate firebreaks and non-combustible barriers are also needed.

2. Insurance Considerations

➢ **In Canada, insurance is more expensive for mass timber than for conventional materials by about 10 to 15%**

There are different types of construction insurance for building projects, however for mass timber, one of the key challenges has been with "course of construction" insurance. All interviewees agreed that insurance for mass timber is more expensive than that for construction projects using conventional materials, though there was some variation in experiences. Per one interviewee, the real issue is lack of insurer familiarity, not the risk itself as insurance costs overall typically account for just 3–4% of total costs. .

Insurance cost experiences and projections offered by interviewees include:

- Insurance renewable premiums / replacement cost estimates of $1,000/sq. ft., despite construction costing $450/sq. ft.
- International insurers offer $0.23 per $100, whereas Canada charges $0.60–0.70 per $100
- Insurance premiums for MT were 20% higher at the time of building 80 Atlantic, these are now down to 10–15%
- For a $100M project, MT insurance may cost $200K–$300K more than for projects using conventional materials

> *"Insurance was tricky. We had to pitch our story to the underwriters—like selling to investors."*

➢ **Insurance is more expensive for mass timber than for conventional materials due to concerns around fire as well as water damage**

In terms of perceived risks associated with mass timber, it appears that the focus has somewhat shifted from fire, which has been historically a concern (and largely associated with stick and frame construction), to water damage concerns (including from sprinkler system installation, see *Text Box 1: Fire & Water*).

Per WoodSure, general factors they consider in evaluating premiums for projects include:

- **Location**: Seismic zone, infill vs. open site, proximity to emergency services
- **Fire:** Encapsulation, char factor, evacuation
- **Moisture:** Onsite construction *vs.* prefabrication, Just-In-Time delivery, tarp use, moisture plans
- **Contractor expertise**: Track record with projects
- **Lateral load and geotechnical assessments**

> *"Moisture is a bigger concern than fire. Timber's fire performance is known, but wet wood is a silent risk."*

➢ **Lack of historical actuarial data is the single biggest barrier for Canadian insurers**

Per several interviewees, the lack of actuarial data is the single biggest barrier for Canadian insurers. This is associated with the relatively fledgling nature of this market, which means that there is minimal longitudinal data on the durability and performance of tall mass timber buildings. For example, the first tall MT building projects (e.g., >5 storeys) in Canada are only ~15–17 years old, which limits the availability of lifecycle data.

This data gap contributes to hesitancy among insurers and regulators, which has resulted in the Canadian underwriter market being underdeveloped and highly fragmented.

> *"No losses = no data = no risk modeling = no confidence."*
>
> *"We don't yet have enough long-term data—it's still a young building typology."*
>
> *"Insurance moves slowly. Without a business case or claim history, most insurers won't move into this space."*

➢ The lack of actuarial data on performance means that most insurance guidelines are based on outdated risk assumptions associated with lumber/stick framing

Due to the lack of available data, most insurance assessments in Canada are based on prior work done on fire safety guidelines for four to six-storey wood buildings, which still informs best practices. This means that insurance for MT is mostly based on outdated risk assumptions associated with dimensional lumber/stick framing, even though the actual risk is much lower due to the larger wood elements used in MT projects (for example, only one of Nordic's 3,000 projects across North America has had an incident with fire).

Interviewees were consistent in noting these assumptions need to be updated, as MT materials are different and less fire-prone than traditional stick and beam (though the risk remains higher than steel/concrete).

> *"MT is treated like stick-frame for insurance—this doesn't reflect the actual risk."*

- **Mass timber developers are looking to secure their insurance support abroad and from larger companies to acquire more favourable terms**

Per several interviewees, most MT developers have had to look abroad to larger insurer companies (like Lloyd's of London) to acquire more reasonable rates. Most Canadian developers therefore source insurance from the U.K. and European insurers, where packages are more competitive. EU underwriters require fewer fire mitigation hoops, have had longer exposure to MT and fewer historic losses.

- **The lack of understanding of mass timber developers by Canadian insurers is affecting the feasibility and approach to developing projects - this is compounded by a general lack of interest in this area by the insurance industry itself**

Overall, the high costs of insurance and/or this perception affect the feasibility of MT projects. Companies like EllisDon for example, syndicate insurance coverage due to capacity limitations among underwriters, and have also had to undertake internal research to support insurance industry education.

> *"We face insurance hurdles on every project—cost, complexity and lack of understanding in the market."*

According to the Insurance Bureau of Canada, the insurance industry itself in terms of its broad constituency is not indicating significant interest in or appetite for this area to date.

> *"Mass timber has appeared in the climate resilience conversations, but we're not hearing about it regularly from the [insurance industry] members."*

3. Non-Costing Challenges & Considerations

The following highlights non-costing challenges and considerations that have been associated with mass timber projects in Canada. Interviewees noted that, in their experience, the sector is presently impacted by:

- **Perceived and actual performance risks impact broader uptake**

Modular and offsite construction can face some performance risks. Questions around waterproofing and longevity can impact projects (i.e. as when a design reverted to traditional materials due to perceived durability issues with the roof, per one interviewee).

Some suppliers have also preferred to avoid the condominium market entirely due to frequent litigation associated with that segment overall.

> *"We don't chase condos as these represent too much risk. Focus is on rental and institutional."*

- **The specialized design and contracting considerations needed for mass timber require early planning and coordination, an informed design team, and supplier involvement**

Project teams must prioritize consideration of mass timber to design projects most optimally and efficiently, as retrofitting a design that was originally built for concrete leads to significant inefficiencies. Successful mass timber projects require more intensive coordination earlier on in project stages, particularly for aspects like panel penetrations and column spacing, as well as addressing encapsulation requirements.

Efficient execution however is exacerbated by the reality that many current design teams lack MT-specific knowledge (which results in problems like specifying 52' long CLT panels or overly wide elements that can't be provided or shipped). The design team overall must include experts who understand the unique detailing, structure, acoustics, fire, and code implications of mass timber. Design teams also need to understand the unique and proprietary limitations of individual product manufacturers due to differences in elements like grid layouts, column heights or material strength.

Many stakeholders agreed that design-build contracts do not work well for MT projects unless suppliers are also brought in early, such as through a "Design-Assist" approach for subcontractors to optimize detailing and coordination. This early onboarding of MT manufacturers is essential to avoid redesign, delays, and cost escalation. Although the design-

assist model is ideal, it can also be costly however as suppliers are stretched thin, and often charge for time.

> *"Success in MT comes from bringing the right people together early. Timber is not business-as-usual."*
>
> *"You need earlier and deeper coordination—it's less forgiving than concrete."*

- **As Canada has no unified standard specifications for mass timber suppliers, building projects need to be designed around the supplier's products**

Standardization across suppliers doesn't exist yet, which means that (1) dimensions and systems vary, and that (2) designing without a selected supplier increases risk. Unlike Europe, Canada lacks unified specifications for MT-grade products.

> *"European suppliers give you specs and dimensions. Here, every supplier is different."*

Consequently, projects are often designed around the supplier's system, which include considerations around grid layout, dimensions, structural logic and panel types. Examples include projects like Intelligent City, which uses various MT panels like CLT and mass plywood, sourced from companies like Element5 or Nordic.

> *"You either hire the supplier early and design around their system or tender and redesign—there's no 'one spec'."*

Different regions use different species and cutting dimensions, and it is these considerations, such as MT panel sizes and span limitations, that drive key design decisions. Floor plans are structured around fixed panel dimensions and column spacing. This is key in MT projects, in that structural simplicity and repeatability matter more than in concrete.

- **Regulatory variance between regions and stringent code requirements can contribute to development disincentives for mass timber projects**

Regions like Vancouver can be more complex for mass timber projects due to seismic requirements. For example, full encapsulation at 18 storeys (as per code) is cost-prohibitive, especially in Vancouver's stricter seismic/code environment which creates higher costs and complexity.

Zoning policies and dimensional expectations in cities like Toronto are built around concrete norms (e.g., floor heights, setbacks). This creates friction when applying MT systems that don't

match typical concrete profiles. Ideally, pending relaxation of mid-rise zoning will benefit future mass timber projects.

Overall, the sector is impacted by development disincentives such as time-consuming code variance processes and permitting delays, as well as specific fire code requirements. Fire code requirements (such as 2-hour ratings) often lead to the requirement for encapsulation (e.g., drywall), especially in tall building projects.

The alternative, which involves leaving wood exposed (for aesthetic and branding reasons), requires larger columns and deeper floors, all of which increases cost.

- **Lack of broader understanding of mass timber results in a default to conventional materials as well as to conservatism in mass timber project approaches**

As there is still limited MT RFP literacy, project managers often default to concrete to reduce perceived risk. Some developers back out due to complexity or lack of mass timber expertise. Without a well-optimized team, the use of mass timber often appears too expensive, and many developers walk away due to cost or complexity.

> *"Most clients who start with mass timber don't follow through—it is usually [due to] the cost or lack of the right team."*

Also, past pilot buildings were overbuilt or used outdated/inefficient methods (e.g., balloon framing, oversized CLT panels) which still informs much of the understanding of the industry today.[4] There is a need to educate designers and developers to avoid this historical over-conservatism that drives up costs.

- **Mass timber's efficiency above grade is compromised by the interior work required to meet moisture and enclosure requirements**

MT might be appealing from a speed or carbon lens, but according to one interviewee: "efficiency above grade is not yet proven at scale compared to familiar systems". Wood can go up quickly on the exterior, but interior work slows down due to requirements to meet moisture protection and enclosure requirements.

This time-to-market and real-time value of money heavily influence construction system decisions. Currently, total precast has the fastest cycle time, which benefits *pro forma* and the return on investment.

[4] Per the Transition Accelerator (2024) "non-standardized lateral systems, such as timber brace frames and balloon-frame CLT shearwall systems are frequently used in mass timber buildings. Woodworks has advanced standards for such systems and provides design guides, for example for CLT diaphragms. Canadian building codes should also keep pace with such developments."

> *"Schedule is key. Even if a system is cheaper, if it takes longer, it might still cost more."*

- **Mass timber product limitations impact design in that simplicity and structural continuity is key for successful projects**

The use of wood makes the most financial sense when applied to repeatable, stacked layouts having few step-backs. Step-backs (due to zoning) or narrow sites increase material and structural complexity as essentially, mass timber "likes to stack" for structural continuity. Wood is also less adaptable than concrete for cantilevers or irregular forms, as cantilevers require steel, which adds cost and complexity.

Simplicity is key in MT projects, whereas step-backs, cantilevers, and transfers add cost and complexity. It is critical to avoid complex geometries as all openings and mechanical, electrical and plumbing systems need to be pre-planned as, unlike concrete, there is no opportunity to drill/core after installation.

> *"Built form is priority #1. Mass timber works best when the geometry is simple and efficient."*

> *"Unlike concrete, you have to design around the product, not vice versa."*

- **Inclement wind and weather during construction can cause project delays**

One interviewee noted that using mass timber allowed for fast erection (~10 days per floor) in their project, but inclement weather (wind, rain) caused significant delays as the wind sway of panels and moisture exposure were major issues.

It is now more common to build under tents out west to mitigate, however weather and moisture risk can still be underappreciated risks during construction, and result in unanticipated refinishing costs where wood is exposed.

- **Moisture management is a distinct technical risk to using mass timber that is key to address during project construction phases**

Moisture is a distinct technical risk in MT construction. While manageable, poor execution can cause long-term problems resulting in trapped moisture. According to interviewees, rain protection, scheduling, and drying protocols are essential to success, and in particular protecting ends to prevent moisture wicking.

> *"Moisture isn't hard to handle—but it must be taken seriously or it can become a disaster."*

4. Costs & Financing

4.1 Costing

➢ **Higher construction costs pose a major barrier to mass timber projects and can exact an estimated 10 to 20% premium over concrete**

Higher cost remains a major barrier to mass timber projects, with an associated 10 up to 20% premium over concrete construction.[5] Costs are affected by project-related factors like additional height, which is common and can add up to 10% in building envelope costs. Sound attenuation, fire rating, and concrete toppings also add costs that can be often underestimated, as can refinishing of wood surfaces where water staining has occurred. Further, the need for concrete basements or podiums in MT projects creates hybrid costs that aren't always considered.

➢ **External factors also drive up costs for projects, such as supplier costs and market volatility around lumber**

External factors that affect costs include producer differences and lumber market volatility (e.g., fluctuating casing form costs, lumber price spikes during COVID). The availability and pricing of wood, especially post-COVID, can affect scheduling and cost. Recent U.S. tariffs and uncertainty around material sourcing and engineering origin have also caused project cancellations.[6]

The cost of lumber is particularly impactful given that structural wood typically makes up 15–25% of total project costs; these costs can run even higher (up to 30%) for expressive or institutional projects.

➢ **Premiums can be offset by realizing schedule savings for mass timber projects but requires a high degree of planning and alignment throughout the supply chain**

Such premiums must be offset by speed (such as faster build time, which can result in schedule savings), value, and quality gains/less waste to help justify mass timber adoption. Schedule savings are frequently cited as a benefit to MT, but these savings are only realized if trades (e.g., millwork) can keep up with installation speed, and are rarely realized in current projects.

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[5] MT is not the cheapest option—cast-in-place concrete is still the default in Toronto. Although Vancouver uses more structural steel, concrete dominates mid-high-rise typologies.

[6] Nordic had five to six projects cancelled recently. These risks are a barrier to expanding U.S. market presence (Nordic)

Costs can also be offset by reduced seismic requirements (due to lighter structures), and reduced need for on-site work (no coring or drilling, which implies fewer trades being needed post-structure erection).

In general, assumptions about time savings must be explicit and realistic and backed by good planning and drawing detailing, as better scheduling alignment and plan clarity can reduce site overhead and financing costs.

> *"The value is in the speed—but only if the whole supply chain is coordinated."*

- **The net cost of using mass timber is highly project-specific, which complicates drawing comparisons between projects**

Mass timber cost comparisons or evaluations are rarely apples-to-apples due to projects having a unique configuration of all these factors occurring and differences in their building form and systems. For example, structural savings may be offset by added drywall/sound attenuation, which will vary by project.

Estimating value is thus case-specific and must be weighed carefully against cost, insurance, and team capability. Overall, MT costing depends heavily on location and structural trade-offs, and it is "important to weigh system-level decisions, not just headline materials".

> *"With MT, you might save on structure, but then spend more on sound attenuation or substructures."*

4.2 Financing

Due to the elements treated briefly above, mass timber projects carry high contingencies due to uncertainty and variations in costing. These aspects can impact project financing, however perspectives on the availability of financing vary with the size of mass timber projects under consideration.

- **Terms and conditions between mass timber and conventional materials are generally similar for larger projects, but differences are more likely to arise for smaller deals (<$50M)**

Generally financing for larger mass timber projects (+$50M) is evaluated based on traditional real estate metrics such as project budget, sponsor equity contribution, expected income and developer experience with similar/scale and form.

For mass timber, unique requirements might include evaluating a builders' familiarity with MT and similar type projects, identifying any prefabrication and modular issues, or the timing of asset arrival and lien rights. Risk factors may include structural unfamiliarity as well as high complexity associated with the construction supply chain and assembly.

- **Projects often require large upfront payment to manufacturers due to offsite prefabrication. This can create cash flow stress for smaller projects, as financiers prefer to release funds only with onsite proof of progress.**

Mass timber projects can require large upfront payments to manufacturers due to prefabrication, a key element of construction. This can create cash flow stress as banks are considered to be generally reluctant to finance offsite fabrication.

Typically, financing is released with visible site progress, which can directly conflict with MT's reliance on off site fabrication timelines. Some interviews suggested that this means that lenders are hesitant to release large funds to manufacturers or offsite fabricators without onsite proof of progress.

- **Loan structures and contracts must align with manufacturing timelines for mass timber projects**

Consequently, loan structures and contract types (e.g., deposits, progress payments) must align with manufacturing timelines, which can create both a cash flow and a timing issue for MT projects. The mismatch between financing and construction timing was perceived by some interviewees to be a core challenge, with the result that syndicated financing for smaller projects in this space is rare as banks typically finance only one or two projects a year.

- **Post-occupancy benefits of mass timber are mostly excluded from return on investment models being evaluated**

Lenders and cost consultants rarely get insight into post-occupancy benefits like operational savings or embodied carbon performance, as these benefits are difficult to quantify. Consequently, these benefits are mostly excluded from ROI models that developers and lenders use.

Financiers would value further understanding of building performance over time (especially financial metrics), fire safety engineering data, as well as data showing that MT buildings achieve higher rents, lower cap rates, and/or higher occupancy.

➢ **In Canada, government backing has been key to help support mass timber financing for smaller projects, particularly via the Canadian Mortgage and Housing Corporation**

In Canada, government programs have stepped in to support financing. Although some private projects exist, government-supported housing projects dominate this market currently. Many projects currently depend on CMHC-backed construction loans, especially for smaller projects that don't attract syndicators.

➢ **The financing appetite for larger mass timber projects is significant**

Other interviewees have indicated that for larger projects, the financing appetite for mass timber is significant, and big banks frequently outcompete smaller bidders on construction financing for such projects.

5. Recommendations & Next Steps

5.1 Recommendations

For insurance, recommendations from the consultation to date focus on updating assessments to reflect mass timber "realities", developing mechanisms to increase mass timber data availability and guidance for insurers, and standardizing tracking to help inform tools in this area. Expanding the understanding, comfort level and appetite for insuring mass timber projects for the broader industry in Canada would also be of benefit. Specific recommendations include:

1. **Update insurance assessments** for mass timber from prior work done on fire safety guidelines for four to six-storey wood (stick and frame) buildings, which still informs the kind of practice applied to what is a very different type of material.

2. Consider creation of a **data pool on mass timber pilots and projects** and look to other new industries (like autonomous vehicles) to understand how insurance data has been created and applied to offer insurance guidance in emerging sectors.

3. Standardize **data tracking** (e.g., form, material, geography) to help inform future insurance tools.

4. Build **events and outreach** geared toward the broader insurance industry that delineate the "new mass timber" market and help refresh outdated assumptions in this area, as well as outline the growing market opportunity and applicability of this sector.

"We need real-world pilots that help insurers price risk properly—right now they're flying blind."

"If we want mass timber to play a role in solving the housing crisis, we have to figure out the insurance side together."

"We don't need every building to burn to get data—but we do need proactive, coordinated pilots and shared learning."

With regard to financing, recommendations include to focus on mechanisms to further understanding and address bank hesitancy to finance off-site manufacturing for smaller projects. Continued subsidies to help drive completion of more projects can help generate market comparisons and make it easier for lenders to underwrite smaller projects with confidence. Specifically:

1. Consider CMHC-backed loans that can **address bank hesitancy** on off site fabrication financing in smaller mass timber projects.

2. Develop a **subsidy stream** specifically geared to drive early adoption of smaller-scale residential mass timber projects.

3. Focus on the **development of tools and case studies based on smaller residential applications** to enable market comparison, and to make it easier for lenders to underwrite projects with greater confidence.

With regard to addressing project costing, it would be useful to develop and issue resources that can help build transparency around best practice costing and design strategies. This can help developers share knowledge and optimize the overall understanding and consequent approach to the sector. Examples include:

1. Advocate for **clear archetypes** in urban design and costing to better inform trade-offs.

2. Issue **geometry and cost correlation studies** to optimize adoption.

3. Develop **macro-level tools** like a Mass Timber Archetype Catalogue and/or cost/*pro forma* benchmarking assets.

4. Issue **credible costing studies,** especially to provide baseline comparisons between mass timber and conventional systems.

5. Build a **national costing data** resource for mass timber buildings.

"We would welcome anything that brings transparency to costing and design strategies—it helps everyone."

"We need baseline cost data—it's hard to have a fair comparison without it."

With regard to enabling project efficiency and expediting adoption, it will be key to continue advocating for early planning and design in such projects, as well as look to address some of the over conservatism in design that is a legacy of earlier projects. Building further alignment with housing supply goals is also an area of growing opportunity.

1. Advocate for **early conversations** between developers, suppliers, contractors, and insurers to:
    a. Define moisture mitigation plans
    b. Confirm contractor experience
    c. Identify mass timber proportions and structural uses (encapsulated/ hybrid/ exposed)
    d. Assess and plan for site-specific risks (fire, seismic, infill)

2. **Provide broader education** for designers and developers to address historical over-conservatism that drives up costs.

3. **Advocate for standardization** within the manufacturing sector for grid layouts, spans etc.

4. Consider **innovation zone/relaxed permitting** for MT projects, particularly in the mid-rise segment.

5. Better align mass timber innovation with **housing supply goals** (e.g. federal "Better Homes" initiative).

With regard to addressing specific project risks around moisture, it will be important to support mechanisms and develop capacity to address key risks around moisture during construction phases, for example through:

1. **Incentivize** prefabrication and modular segments to reduce moisture and fire exposure.

2. Develop **capacity for provision of innovative scaffolding / tenting services.**

5.2 Next Steps

In terms of next steps, SBC recognized that there are many organizations in Canada looking to advance mass timber as an industry, which includes but is not limited to the activities of FPInnovations, WoodWorks, and Woodsure (all of which were interviewed for this study), as well as work by the Transition Accelerator, Forest Products Association of Canada, the Canadian Wood Council, and Energy Futures Lab.[7]

SBC has played a key role in the development of the sustainable building industry since its inception in 2003, and has been a leader in advancing sustainability with building practitioners, enabling designers, developers, builders, and operators to achieve and execute high-performance outcomes in the field. Work has included but is not limited to delivery of over 800 Savings By Design (SBD) workshops as well as the authorship of industry-focused guides and tools to support sustainable building practices across the country.

In this vein, SBC would be well positioned to help drive forward recommendations resulting from this work, both in terms of its industry expertise, its experience in convening needed stakeholders and its trusted position with industry and building professionals. Particular areas where SBC could play a key role to address barriers to mass timber deployment that have been identified include:

1. **For insurers:** SBC can create and deliver events geared toward the broader insurance industry that delineate the “new mass timber” market and help refresh outdated assumptions in this area for insurers, as well as outline the growing market opportunity and applicability of this sector in meeting Canada’s housing and sustainability objectives.

2. **For lenders:** SBC can help arbitrate and develop tools and case studies based on smaller residential mass timber to enable market comparison, and thus make it easier for lenders to underwrite projects with greater confidence.

3. **For costing**: SBC can help arbitrate and develop credible costing studies that provide baseline comparisons between mass timber and conventional systems. This compilation could help contribute to a national costing data resource for developers interested to explore mass timber buildings.

4. For **enabling project efficiency and expediting adoption**, SBC could look to adapt its highly successful Savings By Design approach to mass timber projects. SBC could look to bring together the necessary experts to help developers navigate the early design process that includes key elements required for successful deployment, such as:

[7] Who collaborated to author a Mass Timber Roadmap in 2024.

- Approaches and resources for defining moisture mitigation plans.
- Defining and confirming the contractor experience.
- Identifying mass timber proportions and structural uses (encapsulated/ hybrid/ exposed).
- Assessing and planning for site-specific risks.

This approach is very similar in structure and effort to the type of work and planning that SBC has taken to its SBD projects, and this model could be adapted to help builders and developers navigate the mass timber area most effectively in the field.

APPENDIX A: Key Experts Consulted

We thank the following experts who contributed their time and expertise in this consultation.

1. Annabelle Hamilton, WoodWorks
2. Cieran Brady, Finnegan Marshall
3. Connie Rowley, Axis Insurance/WoodSure
4. David Croteau, Nordic Structures
5. David DeKort, Mattamy Homes
6. David Moses, Moses Structures
7. Dorian Tung, FP Innovations
8. Eli Miller, Hullmark
9. Eric Visser, Vancity Community Investment Bank
10. Gordon Anderson, Peel Region
11. Hailey Quiquero, WoodWorks
12. Jason Clarke, Insurance Bureau of Canada
13. Jeff Ranson, Northcrest
14. Krishan DeSilva, Hines
15. Leith Moore, R-HAUS/Assembly Corp.
16. Margarita Perez, Peel Region
17. Patrick Crabbe, Bird Construction
18. Paul DeBerardis, RESCON
19. Steven Dulmage, Windmill Developments
20. Stephen Savell, Urban Equation
21. Sylvain Gagnon, FP Innovations
22. Tim Buhler, WoodWorks
23. Tim Caldecott, FP Innovations
24. Vince Davenport, EllisDon
25. Wayne McMillan, Quadrangle

APPENDIX B: Sample Interview Questions

Sample Script for Builder / Designer Segment

Thank you for agreeing to an interview. As I mentioned in my email, Sustainable Buildings Canada has been engaged by Natural Resources Canada and the Green Construction through Wood, or GCWood program, to research and develop a Mass Timber Costing Guide.

We have a series of questions meant to draw on your experience to better understand the unique or different cost factors applied to a tall wood residential project when compared to the more traditional steel or concrete construction.

We are recording this call for the purpose of preparing our final report, and your responses, and any confidential information you share with us will be anonymized in the final report. Are you ok with us recording this?

Alright, let's get started.

1) Please share a little bit about your current projects and practices. Are you currently building, designing or planning a 7 to 18 story residential project?

2) Can you share some details on:

a. Project name and geography
b. Design team
   - Architect
   - Structural Engineer
   - General Contractor
c. Construction Delivery model
   - CCDC
   - IPD
   - P3 or other
d. Financing approach
   - Banks
   - Private lenders
e. Insurance details

- Different between types of construction and how?
- What stage is insurance a consideration.

3) What factors, in order of importance, are considered when planning a project of this scale? What cost factors go into the proforma in order of importance ? How do these costs differ for MT projects vs. more conventional approaches?

4) What is your preferred construction type and why? What do most builders build in this archetype? When does that differ?

a. Regulatory?
b. Market?
c. Municipal influence?

5) What do you believe is the cheapest form of construction? The fastest?

6) Are you planning on using, or have you considered using Mass timber or some hybrid that includes engineered wood products?
Have you considered it, but then switched back to conventional? If so, why?

Prompts:

- Regulatory?
- Regional or consumer interest?
- Insurance?
- Financing?

7) If yes, Why did you choose timber?

Prompts:

- Cost?
- Carbon?
- Schedule?

8) Can you describe the project construction? What was wood and what was other material?

9) Did the structure of the design team or the delivery team change? Anything unique? What about the delivery model?

10) Where did you go for information and expertise in tall wood construction?

11) Were there any major obstacles that had to be overcome?

12) Any “eureka moments”? Big successes?

13) What would you do differently next time?

14) Would you consider participation in an advisory panel?

15) Would you be willing to share project cost *pro forma* information anonymized and expressed as a percentage of overall project cost?

16) Can others from our team reach out to you if we have further questions?

Thank you for taking the time today, would you like us to follow up with project updates?