AI Risk, Verification and Trust in New Zealand Construction Documentation

Managing generative AI influence on construction specifications and technical information through better traceability and professional oversight.

Industry White Paper | New Zealand Construction Sector

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Abstract

The increasing use of generative artificial intelligence (AI) in construction documentation presents both opportunities and risks for the New Zealand construction sector. While these tools can improve efficiency and reduce administrative burdens, they also introduce new forms of professional, technical, and regulatory risk when documentation contains unverifiable, incorrect, or contextually inappropriate content. This paper explains how large language models can introduce compounded errors through uncurated source data, why these risks are particularly acute in specifications and compliance-related technical information, and why traditional quality checks are no longer sufficient on their own. It proposes verification and traceability as practical controls for showing provenance, professional oversight, and New Zealand relevance in construction documentation, increasing trust across designers, manufacturers, constructors, councils and insurers.

These issues may become more significant if New Zealand moves toward proportionate liability in building and construction, because the ability to show who contributed what to documentation, on what basis, and with what professional review will become more important when responsibility is more directly allocated across project participants (Office of the Minister for Building and Construction, 2025).

1. Industry context: documentation as a legal and technical instrument

In New Zealand, plans and specifications are relied upon throughout the building consent process and the construction lifecycle as part of demonstrating Building Code compliance and supporting the issuing of a Code Compliance Certificate. MBIE's building consent guidance reinforces that the consent system assesses whether building work, if completed in accordance with the plans and specifications, will comply with Building Code performance requirements (MBIE, 2022a).

Because these documents shape contractual obligations, performance expectations and compliance pathways, documentation is not merely descriptive. It becomes a key instrument through which responsibilities are allocated and decisions are justified. Where specifications and schedules are incomplete or inconsistent, downstream impacts include rework, delayed decisions, increased requests for information, and disputes—costs that tend to escalate because inconsistencies are often discovered late (Construction Productivity Group, 2021).

New Zealand's wider consenting discussion also highlights ongoing system pressure for clearer roles, more predictable decisions and more efficient processes. MBIE's consultation material on building consent system options identifies documentation-related confusion and inconsistency as contributing to frustration and uncertainty for owners, designers and builders (MBIE, 2022b).

This legal and commercial significance may increase if New Zealand proceeds with proposed reforms to shift building and construction liability settings from joint and several liability to proportionate liability. A more responsibility-based model would place greater practical weight on identifying each participant's contribution to defective work. In that environment, documentation that cannot be traced to a reliable source, shown to have been properly reviewed, or justified in a New Zealand context creates greater risk for the parties relying on it. Therefore, verification and traceability would become more than just quality issues and become part of how responsibility is understood and defended across the project (Office of the Minister for Building and Construction, 2025).

2. Generative AI and the changing risk profile of documentation

Generative tools can accelerate drafting and formatting, but they change how errors arise. Large language models are trained on vast volumes of text drawn from sources that are typically uncurated, uneven in quality and often not specific to New Zealand's codes, standards and practice environment. General-purpose tools can hallucinate or misquote information unless they are grounded in the actual documents and checked by the professional (Engineering New Zealand, 2025).

A distinctive risk is error compounding. Because models generate plausible text by pattern-matching across diverse sources, they can recombine small mistakes into a single clause that reads as coherent and authoritative. This is commonly described as hallucination or 'AI slop': content that looks professionally written but lacks reliable provenance, contains incorrect references, or reflects assumptions that do not align with New Zealand requirements (Engineering New Zealand, 2025).

Practical examples already being discussed in the New Zealand construction sector include using AI to scan building plans and flag potential compliance issues before an application is lodged, automating repetitive tasks such as scheduling, form-filling and reporting, and improving on-site safety by identifying risks in real time. These examples are relevant to documentation risk because they increase the volume and speed of information being generated and relied upon, making provenance and review discipline more important (Building Today, 2025).

A second, less visible risk is omission. Experienced practitioners may detect what is incorrect in a generated clause, but it is significantly harder to identify what the tool failed to include—critical interfaces, performance limitations, sequencing considerations, or compliance assumptions that would normally be raised through professional judgement. This matters because omissions can be just as significant as incorrect statements in a performance-based compliance environment.

3. Risk distribution across the project value chain

Documentation risk is shared. The party that authors a clause is not the only party impacted by its errors. Each project participant uses documentation to make decisions that carry cost, time and safety consequences.

Designers face professional exposure when issued documents contain errors that cannot be justified. When generative text is inserted without a verifiable basis, it becomes difficult to demonstrate reasonable care and independent judgement, because the origin and rationale of the clause may be unclear.

For designers, professional accountability remains central. The NZRAB Code of Ethics requires registered architects to exercise unprejudiced professional judgement and to perform the architect's professional activities with reasonable skill, care and diligence (NZRAB, 2018).

Contractors and subcontractors face practical and commercial risks when requirements are ambiguous, conflicting, or include unintended 'means and methods' language. Ambiguity increases requests for information and variations; inconsistencies can lead to rework or claims that the contractor should have detected errors.

Councils and consent authorities face assessment risk when submissions include unsupported performance claims or unclear compliance pathways. Poor documentation increases follow-up cycles and contributes to consenting delays (MBIE, 2022a; MBIE, 2022b).

If and when liability settings move toward a proportionate model, participants are more likely to face direct scrutiny of the extent to which their own acts, omissions, approvals and authored documentation contributed to a defect or compliance failure. That matters for AI-influenced specifications because the risk does not sit only with the person who first generated the text. It can extend to the people who adopt it, rely on it, issue it, or fail to detect that it is wrong, incomplete or not fit for the New Zealand context. Where the source of a clause is unclear, the review steps are undocumented, or professional judgement cannot be shown, it becomes harder to demonstrate that reasonable care was taken (Office of the Minister for Building and Construction, 2025).

4. Why traditional quality checks are no longer sufficient on their own

Historically, documentation quality has been managed through professional review, peer checking, and experience-based judgement. These remain essential, but the speed and plausibility of generative output increase the likelihood that subtle issues evade surface-level review. AI tools cannot make professional judgements or sign off work, and professionals must read and verify referenced clauses themselves (Engineering New Zealand, 2025).

Traditional proofreading is effective at catching typographical errors and obvious inconsistencies, but it is poorly suited to detecting hallucinated standards, subtly incorrect performance statements, or missing interface requirements. In addition, if specification text is generated or revised independently of

drawings and schedules, contradictions can be introduced unintentionally and only discovered later, when they are expensive to resolve (Construction Productivity Group, 2021).

5. Verification and traceability as a practical foundation for trust

This paper uses verification and traceability to describe the practical controls that make issued documentation defensible. These include being able to identify the source of technical content, confirm that it was reviewed by an appropriately qualified professional, and show that it is current and relevant to New Zealand practice.

The value of these controls lies less in the technology itself than in the discipline around its use: accountability, review, record-keeping, and clarity about who is responsible for issued content (MBIE, 2025).

This is consistent with New Zealand's emerging expectations for responsible AI use. MBIE's Responsible AI guidance for businesses makes clear that organisations should leverage good business foundations—such as accountability, risk management, and record keeping—to manage AI-related risks across the lifecycle of use (MBIE, 2025).

6. Curated and structured content to support verification and traceability

A key enabler of defensible documentation is the use of maintained, curated and structured technical content that is aligned to New Zealand's regulatory environment. Curated content reduces reliance on unverified external sources and limits the risk of outdated or fabricated information entering contract documentation.

Structured classification and consistent organisation of content improve findability and reduce friction. When teams can quickly locate relevant clauses and understand their context, they are less likely to accept generated text without scrutiny or to rely on uncontrolled external material. This also improves traceability by making it easier to identify where technical content came from, how it has been maintained, and whether it remains appropriate for use.

7. Implications for policy, professional practice and regulation

For professional bodies, the rise of AI tools increases the importance of reinforcing standards of competence, diligence and judgement. The NZRAB Code of Ethics provides a clear baseline: professionals must avoid misleading practice and must act with reasonable skill, care and diligence (NZRAB, 2018).

The very likely adoption of proportionate liability in the building and construction sector (at least in some form) implies an increase in the value of being able to show where technical content came from, who checked it, and why it was appropriate for the project. That points to a practical need for better document control, stronger review processes, clearer records of professional oversight, and more disciplined use of curated technical content. In other words, as liability becomes more closely linked to each participant's own contribution, practical risk-control mechanisms are needed (Office of the Minister for Building and Construction, 2025).

For organisations adopting AI, MBIE's Responsible AI guidance for businesses offers a useful framing: responsible use is largely about applying existing organisational disciplines—clear accountability, appropriate controls, careful data handling and documentation of decisions—rather than treating AI as exempt from normal risk management (MBIE, 2025).

8. Conclusion

The key question for New Zealand construction is not whether generative tools will be used, but whether the documentation they influence remains compliant, defensible and trustworthy. Uncontrolled generative content increases ambiguity and weakens accountability; verified documentation improves certainty for all participants (MBIE, 2022a; MBIE, 2022b).

A coordinated focus on verification, traceability, maintained technical content and disciplined review provides a practical pathway forward. This approach supports responsible innovation while strengthening trust in construction documentation across New Zealand (Engineering New Zealand, 2025; MBIE, 2025).

The case for verification and traceability is strengthened by the broader direction of policy reform. If liability settings move toward clearer allocation of responsibility among project participants, the ability to demonstrate the provenance, review history and New Zealand relevance of documentation will become even more important. In that environment, verification is not only a trust mechanism. It is a practical way to reduce risk for both the suppliers and receivers of data fundamental to contracts. However it is achieved, all parties will need to adapt to generative AI as well as a more responsibility-based liability framework (Office of the Minister for Building and Construction, 2025).

Verification and traceability are the practical controls. Defensible documentation is the outcome. Trust is the industry effect.

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