



Identifying and mitigating risk in construction and infrastructure projects

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Risk management in construction and infrastructure projects is a coordinated system of identification, assessment and mitigation of risks that could potentially impact a person, a task, or even the project.

The first step in [risk management](#) is to identify the risk. In this blog, we explore 5 examples of risks that are specific to construction and infrastructure projects and look at ways to mitigate each of those risks:

- Regulatory and permitting risks;
- Weather and natural disaster risks;
- Supply chain and logistics risks;
- Design, engineering and construction risks; and
- Contractual risks.

5 types of risks in construction and infrastructure projects

Regulatory and permitting risks

Construction and infrastructure projects operate in a complex regulatory environment. There are a range of laws and regulations governing various aspects of projects, such as land use, environmental protection, building codes, and safety standards.

Obtaining permits and approvals for a construction or infrastructure project can be a lengthy and costly process, and sometimes requires coordination with multiple agencies and stakeholders.

Recommended steps to mitigate regulatory and permitting risks

- Proactive early engagement with regulators and stakeholders to understand the regulatory requirements and potential challenges;
- Develop a permit strategy and plan for the project, including all necessary permits, approvals, and timelines for approval. This plan should include identifying potential risks and mitigations;
- Conduct an environmental impact assessment to identify and assess potential environmental impacts of the project;
- Establish a monitoring program within a [contract management plan](#) to ensure ongoing compliance with regulatory requirements throughout the project lifecycle. This can include regular audits, inspections, and any relevant mandatory reporting to authorities; and
- Maintaining open communication with regulators and stakeholders throughout the project to ensure compliance and to address any concerns that may arise.

Weather and natural disaster risks

This is probably one of the most notable types of risk for construction and infrastructure projects in Australia. Given that Australia is prone to extreme weather events, such as cyclones, floods, bushfires, and droughts, it is typically an issue that is front of mind in project environments. Extreme weather events are a known cause of delays and increased costs in construction.

Ways to mitigate weather and natural disaster risks

- Conducting of thorough risk assessments to identify potential hazards and vulnerabilities, which includes a detailed analysis of historical climate patterns;
- Implementing appropriate design and construction practices, such as flood-resistant building materials and infrastructure;
- Developing emergency response plans and business continuity plans, particularly for businesses that rely on construction project work;
- Negotiating contract terms and conditions to cater for extreme weather conditions; and
- Scheduling of the project to build in buffers or contingency time in the schedule to account for potential delays caused by weather or natural disasters.

Supply chain and logistics risks

Construction and infrastructure projects typically rely on a complex supply chain involving suppliers, contractors, subcontractors, and logistics providers.

Disruptions in the supply chain can be caused by a variety of factors such as material shortages, transportation delays, or labour disputes. Such disruptions affect the time and costs of a project leading to delays, exposure to liquidated or unliquidated damages and cost overruns.

Ways to mitigate supply chain and logistics risks

- Establishing robust supply chain management practices, including identifying and qualifying suppliers and ensuring that procurement practices include regular performance reviews;
- Developing contingency plans for potential disruptions, such as having different preferred logistics providers on hand, especially for critical items;
- Maintaining open communication with suppliers and contractors; and
- Maintaining buffer stocks of critical materials both during the construction period and for the [defect liability period](#).

Design, engineering, and construction risks

In a complex construction and infrastructure project, there are various technical risks that can be identified. These include:

- [design risks](#);
- [construction defects](#);
- [safety risks](#);
- [technological risks](#); and
- [unforeseen ground conditions](#), and others.

Ways to mitigate design, engineering, and construction risks

- Conducting thorough site investigations to uncover existing ground conditions;
- Before using new or unproven technologies, it is crucial to perform thorough research and testing before implementing them in the project;
- Implementing health and safety plans for the project;
- Engaging experienced engineers and contractors with a proven history of delivering similar projects; and
- Conducting thorough risk assessments, including design reviews.

Contractual risks

A typical construction or infrastructure project may require contract negotiations between project parties, including owners, contractors, subcontractors, consultants, suppliers, and other stakeholders. Unmitigated contractual risk can result in poorly drafted contracts, misunderstandings over contract terms, and leads to costly disputes and project delays.

Ways to mitigate contractual risks

- Engaging a construction lawyer to review contracts and provide advice to ensure that contracts are clear, comprehensive, and legally sound;
- Establishing effective contract management processes for monitoring, documenting, and enforcing contract terms; and
- Open communication between contracting parties is important to build trust and positive relationships. This helps when parties need to negotiate or vary contractual terms and reduce the likelihood of disputes.

Get help from a construction lawyer

Wambeti Legal can assist with risk management by:

- Negotiating, drafting, and reviewing contracts:** We can negotiate, draft, and review your contracts to ensure that they are clear, comprehensive, and legally sound. During any stage of the project, we can also assist with amendments or additional clauses to address risks identified during the project.
- Risk assessment and management:** We can assist you by assessing the legal risks associated with your contracts. We provide advice on the potential legal implications of contract terms and conditions and recommend ways to mitigate these risks.
- Contract administration:** We can help with activities that ensure compliance with contractual obligations and rights.
- Training and education:** We can provide staff training on contract law and best practices for contract management.

Contacting Wambeti Legal

0423 825 235

hello@wambetilegal.com.au

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