



An examination of issues associated with the use of NZS Conditions of Contract

Infrastructure Transactions Unit

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Advisian
Worley Group

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Introduction

On 20 February 2019, the Government announced that it would be establishing the New Zealand Infrastructure Commission, Te Waihanga. The Commission will help improve how New Zealand coordinates and plans its infrastructure, makes the most of the infrastructure it already has, and ensures that investment in infrastructure delivers what New Zealand needs.

The Infrastructure Transactions Unit (ITU) was established within the New Zealand Treasury in advance of the Commission to provide support to agencies and local authorities in planning and delivering major infrastructure projects with a total cost of ownership exceeding \$50 million. It will move into the Commission once established.

The ITU's primary role is to support agencies and local authorities to procure and deliver major infrastructure projects; supplementing rather than replacing existing capability.

Another key function is to prepare research and best practice guidance on major infrastructure procurement and delivery, to provide guidance on specific issues, beyond the more general procurement guidance already available from other agencies.

Purpose

In response to concerns raised by the infrastructure sector, the ITU commissioned Advisian, with the assistance of Urban Outcomes Limited, to undertake an independent review of the use of the New Zealand Standard (NZS) Conditions of Contract for Building and Civil Engineering Construction in local and central government (public sector) initiated infrastructure projects, including the use of special conditions of contract.

This report is intended to assist the ITU in its role to lift the performance of New Zealand's public and private sectors in procuring and delivering major infrastructure projects.

Approach

This report summarises the review findings. It identifies issues from both a public sector and private sector perspective and opportunities for improvement.

Research was undertaken through interviews with leaders from the public and private sectors, including public sector agencies, industry bodies, contractors, consultants, and internal and external legal advisors. The content of this report reflects current issues, good practice, and potential solutions discussed with contributors. Numerous industry reports were also reviewed, and findings incorporated where relevant.

The Ministry of Business, Innovation and Employment (MBIE) is currently updating its Construction Procurement Guidelines¹. MBIE was consulted as part of this review. It is the ITU's intention to use the review findings to inform its input to MBIE's updated guidelines.

¹ For more details on MBIE's updated construction procurement guidelines visit <https://www.procurement.govt.nz/procurement/specialised-procurement/construction-procurement/>

Contributors

Representatives of the Ministry of Business, Innovation and Employment

Representatives of the Ministry of Education

Representatives of the Ministry of Health

Representatives of the Department of Corrections

Bede Crestani & Raymond Yates

Peter Silcock

Peter Degerholm

Paul O'Brien

Duncan Kenderdine

Geoff Hunt

Amanda Greenwood

Sam Jack

Gary Walker & Allan Barclay,

Dan McGuinness

Graeme Birkhead & Malcolm Fleming

Marc Palmer

Lisa Palmer & Paul Kirkham

David Kelly

Hugh Kettle

Paula Nicolaou

Rebecca Saunders

Paul Buetow & Ariana Stuart

Greg Wise & Brian Clayton

Arie Moore

Lucy Sykes

Michael Weatherall

Bob Hall

Cristean Monreal & Fraser Robertson

Wellington City Council

Civil Contractors New Zealand

Calderglan Associates Limited

Dominion Constructors Limited

Downer Group

McConnell Group

Fletcher Construction

Fulton Hogan

Hawkins

L T McGuinness

NZ Institute of Building

Marc Palmer Project Management

Transpower

Master Builders

Bell Gully

Lane Neave

Wynn Williams

Kensington Swan

Chapman Tripp

Reflective Construction Law

Sykes Legal & Consulting

Simpson Grierson

rjha Limited

RCP

Questions and further information

General enquiries about the information contained in this report can be sent to itu@treasury.govt.nz.

Other guidance documents and useful information can be found at

<https://treasury.govt.nz/information-and-services/nz-economy/infrastructure/nz-infrastructure-commission/infrastructure-transactions-unit/>

1 Executive summary

The construction sector contributes seven percent to New Zealand's GDP and employs ten percent of the national workforce (Office of Hon Jenny Salesa, 2019). A thriving sector is vital to New Zealand's social and economic wellbeing. The public sector is a major client, spending approximately \$10 billion² a year on the procurement of infrastructure³.

In August 2018, Infrastructure New Zealand published the report; *Creating Value Through Procurement: A Report into Public Sector Procurement of Major Infrastructure Projects* (Entwine, 2018). This report identified significant issues with public sector procurement and contracting of major infrastructure projects impacting the construction sector.

The Government and industry signed a Construction Sector Accord (the Accord) in April 2019, acknowledging the challenges facing the sector and signalling a shared commitment to transform the sector. This included a commitment to a more visible pipeline of work and procurement practices that are fair, efficient and predictable. A guiding principle for the Accord is the building of trusting relationships⁴.

In response to the Entwine Report and as part of our commitment to the Accord, the Infrastructure Transactions Unit (ITU) within the New Zealand Treasury commissioned a review of growing concerns regarding the use of NZS Conditions of Contract for Building and Civil Engineering Construction (NZS Conditions of Contract) in public sector-initiated infrastructure projects.

The review was carried out by Advisian in conjunction with Urban Outcomes and included interviews with both public and private sector leaders from major contracting, consulting, legal and governing bodies. It also draws on contemporary research and industry reports into the challenges facing the New Zealand and global construction industries.

The findings of the review indicate that there is a 'culture of mistrust' between the public and private sectors. This lack of trust manifests itself in the approach to procurement, contracting (including unfair transfer of risk), and the construction methods used. The review therefore covers more than simply the use of contracts themselves. While it finds the lack of trust is resulting in the extensive addition of special conditions (to modify standard construction contracts), leading to misunderstanding, confusion and ultimately, litigation, it also finds there are a number of other related issues.

² This figure is based on the National Construction Pipeline Report Ministry of Business Innovation and Employment (2018).

³ Infrastructure, as defined in the New Zealand Infrastructure Commission/Te Waihanga Bill, means physical infrastructure in New Zealand or that results in services in New Zealand. An infrastructure project includes the creation of new infrastructure and the maintenance, upgrading, replacement, decommissioning, or removal of existing infrastructure

⁴ For more information on the Accord visit <https://www.constructionaccord.nz/>

1.1 Key challenges

Mistrust between the public sector and industry is contributing to poor outcomes

Many contributors interviewed identified a lack of trust between the public sector and industry. This lack of trust manifests itself in the approach to procurement, contracting (including the unfair transfer of risk), and the construction methods used.

Construction is not the core business of most public sector agencies and there is a skills gap at all levels

There is a lack of knowledge and experience in delivering infrastructure projects in the public sector at the executive leadership level and in staff managing procurement and contracts. This lack of experience leads to ineffective governance, delays in decision making, and a lack of understanding of the impact of decisions on overall project outcomes.

Public sector staff assigned to manage construction contracts may not understand the implications of unclear scope in consultant⁵ appointments or of unresolved designs being issued for tender. They may also lack understanding of the implications of onerous contract conditions being imposed on both consultants and contractors.

As construction is not the core business of public sector agencies, lack of experience at the executive level is unlikely to change, however, advice from industry experts could strengthen project governance. There are also opportunities to better invest in the capacity and capability of public sector staff assigned to manage infrastructure projects, particularly within procurement and delivery teams.

There are perceptions that the public sector does not understand the difference between lowest price and value for money

There is a perception that the public sector does not always conduct a fair and transparent tender process. Contributors to this review described instances of where some public sector agencies have not adhered to the evaluation process described in tender documents.

Certain government agencies⁶ responsible for infrastructure procurement are required to comply with the Government Procurement Rules and the overarching principles that apply to all government procurement and provide the foundation of good practice. These include being fair to all suppliers and getting the best deal for everyone (including the contractor). Responsible staff must be capable of evaluating construction tenders on a value for money basis, considering whole of life costs and the impact of risk transfer, as opposed to simply selecting the lowest price option. This is an important commitment of the Accord.

⁵ Consultant includes architects, engineers, quantity surveyors, project managers and other technical specialists involved in infrastructure design and delivery

⁶ The Government's Procurement Rules (refer Rule 5) apply to all Public Service departments, New Zealand Police, New Zealand Defence Force, and State Services agencies covered by the Whole of Government Direction.

Special contract conditions are unfair, not well understood, and give a false sense of security

The large number of special contract conditions are not reasonable or well understood by both the public sector and industry. These modifications to standard construction contracts, along with the use of unfamiliar contract terms, can lead to misunderstanding, confusion, and ultimately, litigation.

NZS Conditions of Contract and any associated special conditions should not be considered a one size fits all approach to construction contracting. Public sector agencies should consider for each project which contract form is most appropriate and what special conditions are necessary and appropriate. There is an opportunity to create fairer contract conditions as well as more guidance for consistency across the public sector when using the standard NZS contract forms.

Specific concerns regarding special conditions, that are becoming more common in public sector construction contracts, relate to the use of time bars, the lack of liability caps, and the role of the Engineer to the Contract.

The use of time bars is unacceptable, and contractors are not being paid for variations

Industry has raised concerns that a 'culture of contractor disenfranchisement' has developed, whereby clients are using provisions in the special conditions to impose unrealistic time bars in the submission of variations or extension of time claims.

If contractors do not submit claims within a specified period, they are not entitled to be paid for the variation, yet must still complete the work. The perception is that this use of time bars and the growing disenfranchisement regime is a means for the public sector to get "something for nothing".

There are no caps on contractors' liability

There is currently no provision in the NZS Conditions of Contract for caps on contractors' liability. It is apparent that clients and contractors have different views on the inclusion of liability caps and, if included, at what level liability caps should sit and how they should be applied.

There is opportunity to contribute to a sustainable construction sector by providing guidance to public sector agencies in relation to when liability caps should be included in special conditions of contract and the factors to consider when setting such a liability cap.

The Engineer to the Contract must be impartial

The role of Engineer to the Contract is critical for both parties under a construction contract. There is concern that the independence of the role is diminished through the duality of the Engineer to the Contract also acting as a consultant of the client.

This is exemplified where public sector agencies have amended contracts to remove the impartiality of the Engineer to the Contract as required under the general conditions. There is opportunity to provide clear guidance to public sector agencies that ensures there is always an Engineer, and that the Engineer fulfils all aspects of the role and functions, reasonably, impartially, and in good faith.

Risk transfer is unsustainable and aggressive

Risk should sit with the party best placed to manage it. The aggressive approach to risk transfer often means that all risk sits with the contractor. Contractors may also face 'risk transfer by stealth' where risk is transferred through appended contract documents such as design specifications. This is not sustainable.

As part of its commitment to the Accord, the Government has already signalled further work to improve public sector agencies' understanding of risk in design and construction. A fair and transparent approach to risk transfer is needed. This includes:

- an understanding of the balance of risk between designer and contractor across the entire life of the infrastructure project
- the value of risk transfer and acceptance that it must be budgeted for and priced, and
- the adoption of an appropriate form of contract.

A sustainable approach to risk transfer must also consider the cumulative risk exposure across the public sector of the party managing the risk.

1.2 Opportunities for improvement

This review has identified opportunities for improvement relating specifically to the use of NZS Conditions of Contract by the public sector, and more broadly to current practices within the public sector and industry.

In identifying these opportunities, it is important to note the overarching finding that there is a culture of mistrust between the public sector and industry. Therefore, if we are to have a sustainable construction sector that delivers public value, any improvement must be carried out in partnership with industry.

Table 1: Opportunities for improvement

NZS Conditions of Contract for Building and Civil Engineering	
1	<ul style="list-style-type: none"> a) Work with industry to carry out a comprehensive review of the NZS Conditions of Contract. In the interim, include supplementary schedules to the NZS Conditions of Contract to address immediate issues and ensure that the standard reflects current legislation. b) Enable the ability to track changes into the general conditions of contract such that all parties to the contract are able to read it as one concise document, rather than a series of separate documents.
Public sector participation	
2	<ul style="list-style-type: none"> a) Improve the capability of public sector agency governance and delivery team structures for infrastructure projects, including the addition of independent industry experts to support executive members understand key success factors and risks to be aware of in their role. b) Governance structures should be open to advice regarding the feasibility of project timelines from design to procurement to delivery and be ready to adapt and make quick decisions to ensure success. External consultants must be more proactive in providing this advice. c) Poor experience on prior infrastructure projects should not mean future contracts include additional conditions and risk transfer without assessing the root causes and looking at ways to mitigate outside of contracts. Project governance should establish lessons learnt on completion.

Procurement

- 3
- a) Review low cost procurement practices for construction in accordance with Government commitments and the guiding principles of the Accord.
 - b) Ensure better follow-up on examples of poor procurement process as part of rebuilding confidence in public sector processes.

Contracting for construction

- 4
- a) Issue guidance to public sector agencies in relation to good practice special conditions. This could include clear guidance on the obligations of the Engineer to Contract.
 - b) Follow-up with public sector engaged legal advisors in relation to expectations of fair risk transfer when drafting special conditions of contract.
 - c) Consider ideas for more reasonable time bars, and provision of guidance on determining appropriate liability caps.
 - d) Ensure that public sector agencies take a firm and consistent approach to engaging the Engineer to the Contract and consider a separate procurement for the individual, outside of the core project team consultants.
 - e) Consider establishing a panel of individual experts who can be procured for the role of Engineer to the Contract. Panel members should be agreed between public sector agencies and industry and include the ability of individuals to join the panel at any point in time to remove barriers to market entry.

Risk transfer

- 5
- a) Issue guidance in relation to risk transfer, its purpose and management, and the potential impacts if risk is inappropriately transferred. This guidance could require risk transfer to be fully assessed and signed off at an executive level.
 - b) The public sector should assess the level of risk transferred to individual contractors across all public sector projects that they are undertaking.
 - c) In approving business cases for investment, consideration should be given to the appropriateness of risk transfer and its alignment with the procurement and contracting approach. This should include a transparent risk transfer table together with cost and time implications to ensure that informed decisions can be made at an executive level as to whether the risk is retained, shared or transferred.
 - d) The risk transfer outlined in the business case should then be reflected in the tender documentation for both consultants and contractors to ensure the risk apportionment is transparent. The tender analysis should include an assessment of the ability of the contractor to manage the risk and the costs and time associated with this.
 - e) Guidance should be provided to public sector agencies on the different forms of contract available in the market and the most appropriate form to use based on the type and complexity of a project and the risk transfer proposed.
 - f) The use of the Early Contractor Involvement (ECI) procurement model in the public sector should be examined as part of MBIE's revised Construction Procurement Guidance.

2 A sustainable construction sector that delivers public value

The construction sector contributes seven percent to New Zealand’s GDP and employs ten percent of the national workforce (Office of Hon Jenny Salesa, 2019). The public sector spends more than \$10 billion² on construction annually and is the biggest procurer of construction related services in New Zealand. It is important that these services are delivered to a high standard to ensure the achievement of positive outcomes for New Zealand. When spending public money, we must deliver public value.

“There is an erosion of trust right across the sector”

As both the regulator and a major client, the public sector has a significant impact on the sustainability or otherwise of the sector. It is essential, therefore, that in seeking value, the public sector maximises productivity within the procurement and management of construction contracts, and in turn supports improved sustainability. Public sector agencies must believe that a high performing construction sector is good for everyone.

In August 2018, Infrastructure New Zealand published the Entwine Report. The Entwine Report identified significant perceived issues with public sector procurement and contracting of major infrastructure projects, outlining twelve key challenges in ensuring the construction sector is delivering value to the New Zealand public:

- Pipeline uncertainty
- Policy shocks
- Identifying outcomes sought
- Lack of joined-up thinking
- Confusion around value
- Confusion around risk
- Waste in the tender process
- Quality of tender evaluation
- Individual vs. company
- Local vs. global
- Culture of mistrust
- Sub-optimal public sector participation

In particular, the Entwine Report identified two key challenges *“in relation to how the tone set during the tendering phases can permeate through the whole project delivery cycle, often to the detriment of all parties.”*

The first was a culture of mistrust between the public and private sectors, leading to:

- many special conditions that modify standard industry agreements which (according to the Entwine Report) have previously been established as striking a “fair” balance between clients and industry (e.g. NZS 3910:2013 construction contracts), and
- unfamiliar contract terms that may not be fully understood, leading to a failure to appropriately manage risk and, in some cases, resulting in litigation.

The second was sub-optimal public sector participation. Effectively, the public sector must lead, and be actively involved and invested in achieving the overall project outcomes.

Many contributors interviewed for this report mentioned the lack of trust that currently exists within the sector. This lack of trust is impacting on the behaviours of all parties in how infrastructure projects

are procured, the contracting methods used, the risks that are transferred, and the method in which construction is undertaken on site.

This culture of mistrust is leading to an unsustainable industry struggling to deliver projects of public value. The industry does not trust that the public sector has the skills and experience to appropriately procure and deliver major infrastructure projects.

Industry does not believe that the public sector always follows its procurement rules and does not trust it to carry out a fair and transparent procurement process. The public sector is concerned about non-delivery and cost blowouts. This has led to modified contracts that place unreasonable levels of risk on the contractor contributing to unsustainability.

“A project is only successful if it is successful for everyone”

The success of any project relies on the willingness of all parties to work as a combined team within the bounds of their contractual agreements, with a realistic expectation of achieving quality through accurate scoping, robust programming, and a price that will allow the contractor to deliver to meet expectations and still be around for the next contract.

A culture of mistrust and a lack of knowledgeable and mature participation from the client, consultants, or the contractor results in the overall project outcomes not being achieved. Where outcomes are not achieved, value is not being delivered to the New Zealand public.

This culture of mistrust and sub-optimal public sector participation, poor quality procurement and confusion around value and risk, impact on productivity. The McKinsey Global Institute (2017) study into the global construction industry (the McKinsey Report) identified that a critical issue in the global industry was low productivity. It highlighted that construction-related spending accounted for approximately 13% of the world’s GDP, while the global industry’s annual productivity growth had increased by just 1% over the past 20 years. Low productivity has a direct knock-on effect in achieving a project’s outcomes, particularly value for money through time, cost and quality outputs, and ultimately public value.

The McKinsey Report identified seven action areas to increase productivity in the industry by around 50 per cent:

- Reshape regulation
- **Rewire contracts**
- Rethink design
- **Improve procurement and supply chain**
- Improve onsite execution
- Infuse technology and innovation
- Reskill workers.

The Accord has identified similar challenges related to low productivity; suggesting that the following is needed for success:

- Strong leadership and governance
- A connected and collaborative sector
- A broad workforce of qualified, competent and skilled people
- Investment in new technology and other innovation
- **Good risk management and fair allocation**
- Clear and effective regulations
- A world-class health and safety culture
- A well-planned and transparent public sector pipeline

- Whole-of-life thinking across the sector
- **Positive behaviours that cultivate trust and respect**
- Resilient businesses
- **Fair, transparent and consistent procurement practices**
- Cultures and behaviours that allow the industry to thrive and make construction a great place to work.

Also relevant are some of the lessons arising from the collapse of Carillion, a facilities management and construction services company in the United Kingdom (UK). A report by the House of Commons, Public Administration and Constitutional Affairs Committee, (2018) (the Carillion report) identified long term failures in government's understanding of design, procurement and management of construction contracts. The Carillion report found the government had deliberately promoted an aggressive approach to risk transfer, often attempting to transfer risks that it had completely failed to analyse or to understand itself. Procurement had been driven by price while failing to appreciate differences in quality offered.

The Inquiry recommended a fundamental change in attitude by the government towards its partners; ensuring that risk transfer is realistic and that quality, an appreciation of systemic risk and economic impact, as well as price, drives decision making.

Over the past two years the New Zealand construction market has seen four large national contractors withdraw from the market or sold in part due to unsustainable losses, with the risk of further closures. This is not sustainable within a small market.

3 NZS Conditions of Contract for Building and Civil Engineering

The NZS Conditions of Contract is designed to provide comprehensive, yet simple to understand contract forms that can be used in both horizontal and vertical construction. They are made up of the following four standards:

NZS 3910:2013	designed to be used for construction only contracts
NZS 3915:2005	designed to be used for construction contracts where the Principal administers the contract (i.e. there is no Engineer to Contract)
NZS 3916:2013	designed to be used for design and construction contracts
NZS 3917:2013	designed for fixed-term services contracts such as term maintenance contracts.

This report focuses on the use of conditions of contract for construction purposes where the contract is not administered by the Principal⁷, i.e. **NZS 3910:2013** and **NZS 3916:2013**. The difference between the standard where it is administered by the Engineer to the Contract compared to that being administered by the Principal (NZS3910/16:2013 vs NZS3915:2005) is outlined at Appendix B.

Within these standards an Engineer to the Contract is appointed by the Principal to supervise and manage the construction contract. The purpose of this role under the contract requires a sound, impartial individual to make judgement calls on what is a fair outcome under the contract.

NZS 3910 has had four reviews in the past 55 years, with the last significant revision issued in 1987 updating the standard form of contract into the current plain English version. A further update was issued in 2003, which sought to align NZS 3910 with the requirements of the (then) new Construction Contracts Act 2002.

In 2011, Standards New Zealand carried out a limited scope review of NZS 3910:2003. Comments were requested from the public on an initial draft of the revised standard in late 2012 and over 1,000 responses were received. Based on those responses, it was determined that two additional standards would be published alongside the revision of NZS 3910:2003.

The intention of the two new standards was to make the applicable standard more fit for purpose for certain types of contracting models. This would reduce the need for special conditions of contract for two common applications of NZS 3910:2003, being design and build contracts and term maintenance contracts.

All three of the new standards (NZS 3910:2013, NZS 3916:2013 and NZS 3917:2013) were released for use in 2013. It was made clear on their release that the updates were the result of the limited scope review and not a wholesale review of the previous NZS 3910:2003.

⁷ The Person named as such in the Special Conditions and includes its executors, administrators, and successors

The revised standards and the absence of ongoing updates have not dealt with pertinent issues that fundamentally require amendments to be made, for instance they do not reflect legislative changes since the standards were published.

Industry has sought an ability to track changes into the general conditions of contract. While the ideal scenario for some is that no amendments are made to the standard conditions of contract, this is not the reality of use in practice. Allowing a document to have tracked changes inserted enables all parties to read the contract as one concise document, rather than have:

- general conditions
- specific conditions of contract
- schedules, and then
- special conditions of contract,

as three or more separate documents that need to be pieced together. Other international standard contracts allow for this type of practice and it is recommended that this is adopted in New Zealand.

Six years on from the release of the 2013 version, there appears to be a strong desire from industry for a comprehensive revision to establish a more modern contract that is fair and reasonable, taking both the client's and the contractor's positions into account. A recent presentation to the Society of Construction Law New Zealand noted that a comprehensive review of the standard is required to ensure that the document is flexible enough to suit clients' needs, without requiring substantial amendments, and to allow for risk to be allocated between the parties transparently (Degerholm & O'Brien, 2019).

This presentation also suggested the implementation of some swift initial updates in areas where the current standard is widely recognised as being out of date. For example, health and safety provisions do not align with the most recent health and safety legislation and there should be options to add in liability caps. These initial updates or supplementary schedules could be put in place while a more comprehensive revision is undertaken. Representatives from industry are open to working with the public sector to achieve this.

Opportunities for improvement: NZS Conditions of Contract

Work with industry to carry out a comprehensive review of the NZS Conditions of Contract. In the interim, include supplementary schedules to the NZS Conditions of Contract to address immediate issues and ensure that the standard reflects current legislation.

Enable the ability to track changes into the general conditions of contract such that all parties to the contract are able to read it as one concise document, rather than a series of separate documents.

4 Public sector participation

The Entwine Report identified sub-optimal public sector participation as a key challenge to delivering value. The public sector must ensure it is structuring and resourcing its infrastructure project delivery teams in a manner that is efficient but also appropriate for the level and complexity of projects. It must focus on how it is attracting the right capability required to perform its role in infrastructure projects as clients and as project leaders.

4.1 Leadership and governance

Construction is not the core business of most public sector agencies. Most public sector agencies are focussed on delivering services to the New Zealand public, of which infrastructure investment is primarily a support function.

The nature of and inherent risks associated with infrastructure projects requires strong and informed leadership and governance to ensure project success. Infrastructure investment can be a significant part of a public sector agency's capital expenditure and projects are often delivering (or potentially disrupting) high profile public services such as road and rail networks, hospitals, schools, prisons, or other service infrastructure.

The successful delivery of infrastructure projects requires both a level of flexibility and the ability to make fast but appropriate decisions. Strong leadership coupled with robust industry experience is required to keep a project on track as critical issues arise.

It has been suggested that a lack of experience in construction at an executive level in the public sector results in unworkable bureaucracy to get a project complete, for example, a requirement for all variation requests to be approved at the executive level, prior to issuing to the contractor. Having experienced individuals overseeing infrastructure projects at an executive level, but also supporting delivery teams, allows for an informed and proactive approach to issue resolution.

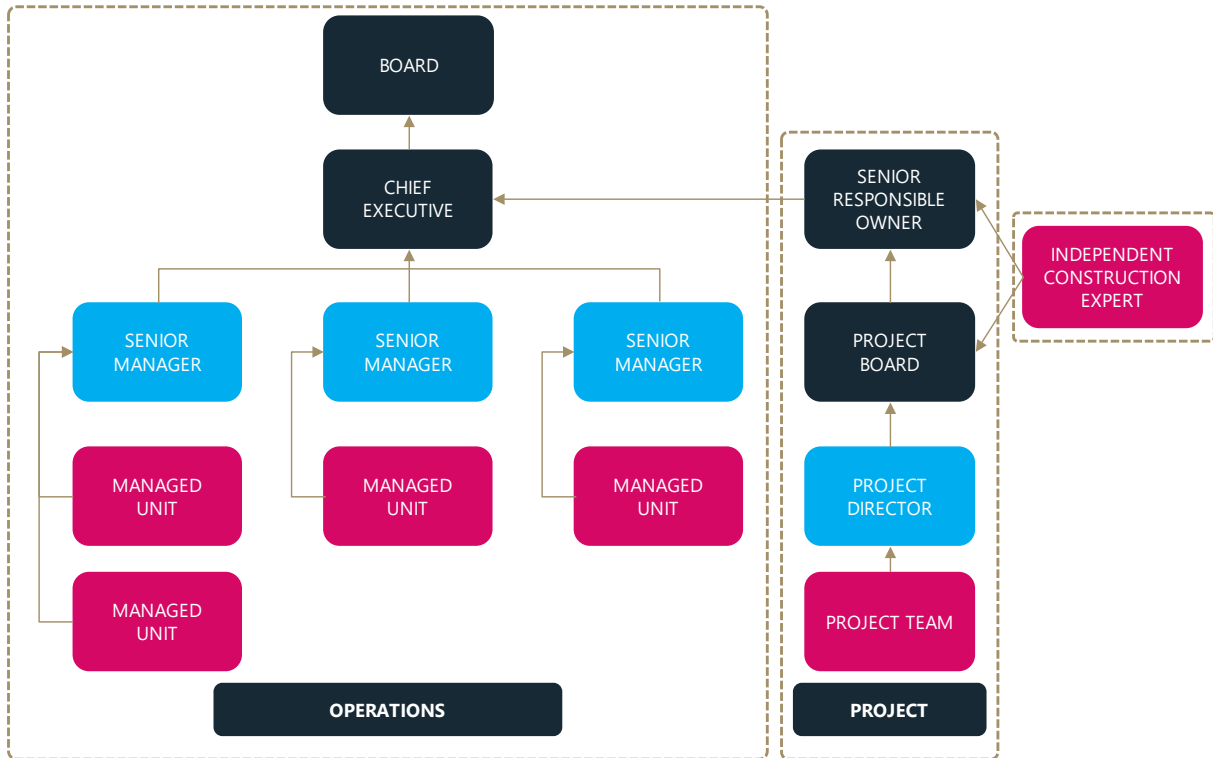
Appropriate project governance structures should be implemented for large or complex infrastructure projects, or any large ongoing programmes of construction work. This includes appropriate executive level sponsorship. Recognising the fact that construction is unlikely to be core business, the executive team will likely require support in understanding key success factors and risks to be aware of. This type of support could be provided by utilising independent industry expertise as a member of the project governance structure, where the level of investment and/or complexity of the project would benefit.

The executive sponsors of infrastructure projects must ensure they are regularly testing project teams and asking pertinent questions to ensure effective delivery. The details of construction contracts, their specific and special conditions and subsequent risk transfer are most often dealt with at a non-executive level. Governance structures should be aware of the conditions of contract being applied to projects and understand their purpose. They should also act as a conduit for escalating contractual issues that may affect the on-site delivery culture if left to manifest too long. The ability to call on an independent industry expert to advise governance on project dynamics alongside any legal advisors would be of value at such times.

Business cases for infrastructure projects should include clear governance structures, which should be reviewed by someone with appropriate expertise, including by any independent industry experts or

other advisors at the level of sign-off. This governance should be differentiated from operational governance as shown in Figure 1 below:

Figure 1: Operational governance vs project governance



4.2 Investment in capability

Industry perception is that there is a lack of investment in appropriate public sector capacity and capability. Examples of this include project managers being pulled from other non-infrastructure projects to bolster delivery teams without any previous relevant experience or training.

“There is a void of experience, whether it be in local or central government”

Public sector agencies need to have internal representatives who understand the dynamics of infrastructure projects, can relate these to how they procure projects and subsequently agree contracts, and who understand what they are purchasing from a whole of life perspective.

Lack of capability translates into a lack of understanding of how political demands to get works started by a certain date, or to meet an opening date, may in fact hinder the overall achievement of project outcomes. These demands may be poorly advised and the project risks over-promising and under-delivering. This creates significant stress in project delivery for both public sector agency and contractor staff.

For instance, sufficient time is required to ensure upfront project planning and, in the case of construct only contracts, the delivery of a complete and coordinated design for tender purposes. Pressure to

reduce that time or meet an arbitrary deadline without allowing appropriate upfront planning and design is highly likely to impact cost and time during the construction phase.

“The design and planning phase of the actual physical asset has the most influence on the public sector’s ability to achieve the long-term outcomes they seek.”⁰

Under more traditional construct only contracts it is not unusual for requests for tenders to be issued without full designs being available. There are examples of public sector tenders having as many as 50 or more notices to tenderers issued within the short three-to four-week timeframe that a tenderer has to prepare and submit, what the agency expects to be a robust and fully costed

tender, often on a fixed price lump sum basis. This is a clear indication that the design was not ready for the tender to be issued and project governance should be advised accordingly.

The tender process is a pressure vacuum at the best of times, let alone when substantial changes are being made during the process, including the reissuing of full drawing or specification sets for design disciplines. This behaviour, alongside short tender timeframes, makes provision of a robust tender price and programme impossible. Mistakes will be made and a lack of trust in public sector management of the project will begin to manifest.

Many contributors interviewed believe the lack of investment in capability has created an over reliance on external project management organisations, in addition to the public sector project manager. However, public sector project managers often have a wide range of internal stakeholders that require considerable engagement and management throughout a project. This is not always obvious to external parties, but it is a very time-consuming aspect of their role. While it is recognised that the public sector must ensure appropriate experience and capacity in their internal teams, it is also reasonable that there is a requirement for additional support from specialists.

It is the duty of external consultants (both project managers and designers) to advise public sector agencies clearly, and well in advance of the required programme, to ensure that when documentation is provided to tenderers, and then for construction, it is high quality and reflects what is required to meet the project outcomes.

“The public sector must have experienced staff who can effect change at the right level”

It is the public sector agency’s responsibility to ensure that it is receiving well considered and realistic advice from its consultants, and that this is appropriately directed to project governance. It must also have sufficient experience, industry understanding, and support at the right levels internally, to take on board this advice and reflect this in expectations for the project.

Consultants to public sector agencies must also understand the constraints associated with the spending of public money i.e. relevant oversight and approval steps. They should seek to get a thorough understanding of the agency’s internal processes and adapt their project planning to reflect this. Equally, contractors must also be aware of these requirements, set up processes to provide early warnings, and think ahead to ensure issues are raised in a proactive manner. This allows the public sector agency sufficient time to consider and respond, while not delaying the project.

4.3 Partnership commitment

An important aspect of the Accord is acceptance of the need to reset the culture to lift the performance of clients, consultants and contractors. Four foundational behavioural principles have been agreed between government and industry:

- Building trusting relationships
- Be bold
- Value our people
- Act with collective responsibility

It is this level of maturity across all parties working on infrastructure projects that is so crucially important in achieving project outcomes and delivering public value. Given the importance of public sector infrastructure and a thriving construction sector to the economy, it must be in the best interests of New Zealand to ensure that all participants are prepared to operate in a fair, reasonable and sustainable manner. This must be front of mind of every individual on a project such that, instead of engaging in unhelpful behaviours, all parties are incentivised to work collaboratively.

Maturity is both a skillset and behavioural issue. All parties delivering an infrastructure project must ensure they have the right capabilities within their teams and that there is the capacity to deliver the project to a high quality. There must be an expectation and commitment from leaders within both the public and private sectors that their employees will act in a fair and reasonable manner towards all parties. An illustration of what this maturity might look like is provided at Appendix C.

Another aspect of maturity is the ability to learn lessons. In many cases where issues have arisen on prior infrastructure projects, the public sector may seek to mitigate risk on future projects, by taking a “harder line” and/or by including more special conditions of contract. It does this rather than assessing the root cause of an issue and looking at ways to mitigate that risk outside of the contract, potentially via the procurement approach, degree of risk transfer sought, improvements in project governance and delivery, or completeness of design. It is therefore important that on completion, project governance establish lessons learnt, including metrics around levels of change during the project, claims analysis, risk management, and out-turn cost and key project issues. The wider public sector would benefit from the sharing of these lessons and metrics across agencies.

Opportunities for improvement: Public sector participation

Improve the capability of public sector agency governance and delivery team structures for infrastructure projects, including the addition of independent industry experts to support executive members understand key success factors and risks to be aware of in their role.

Governance structures should be open to advice regarding the feasibility of project timelines from design to procurement to delivery and be ready to adapt and make quick decisions to ensure success. External consultants must be more proactive in providing this advice.

Poor experience on prior infrastructure projects should not mean future contracts include additional conditions and risk transfer without assessing the root causes and looking at ways to mitigate outside of contracts. Project governance should establish lessons learnt on completion.

5 Procurement

Industry feedback indicates that it does not believe current procurement guidance is sufficient for procurement of infrastructure projects. A practice of lowest price procurement and the lack of relevant construction experience in evaluating tenders has led to a lack of trust in public sector procurement.

It is the responsibility of public sector agencies to act reasonably and transparently, undertaking a robust procurement process with high quality tender documentation based on whole of life public value criteria rather than lowest price. Public sector agencies should be able to rely on tender submissions as complete and accurate to meet the project outcomes (to a high standard), while also relying on consultants and contractors' ability to price and manage risk and make a reasonable margin.

MBIE has recently published updated Government Procurement Rules 4th Edition⁸ (the Rules). The updated Rules are aimed at reforming government procurement to support broader social, economic, cultural and environmental outcomes, as well as continuing to represent standards of good practice during the procurement process. Changes to the Rules include a transformation in the way public value is assessed and calculated with a wider view towards broader outcomes. This signals a move away from consideration of price only, to a focus on getting the best possible result from procurement – a combination of quality, outcomes and price. In addition, as part of the Accord, the government has clearly stated that it does not support lowest price procurement where public value is not assured.

5.1 Lowest price procurement practices

A recent article outlined a view within industry that the New Zealand government is a poor procurer of consultants and contractors, despite being a significant procurer of infrastructure projects (Fleming, 2019). It also notes that the government has an unbalanced and unreasonable approach to risk.

The article suggests that industry has not pushed back on this poor procurement to refocus on promoting "*high performance capability as a benefit that outweighs lower pricing*" and notes that such poor procurement ultimately leads to poor documentation, poor supply chain performance, and risk of contractor failures.

Contributors to this review highlighted a lack of consistency in how tenders are assessed across the public sector, as well as a lack of adherence to the evaluation process described in the tender documents. Examples were provided where, despite the process stating that price envelopes would not be opened

"...educating the public sector to move past 'lowest price' procurement practices is vital if the aim for New Zealand is to have the built environment it deserves – one of quality and durability. The government has a leading role to play in putting in place exemplar procurement practices that commercial procurers can emulate."

⁸ The Government Procurement Rules 4th Edition can be found at <https://www.procurement.govt.nz/assets/procurement-property/documents/government-procurement-rules.pdf>

for all tenderers or would be opened only following completion of the qualitative evaluation, this process had been openly not followed and a lowest-price-wins culture had prevailed.

Some consultants and contractors have expressed frustration that they are providing high quality submissions that are well thought-through, and appropriately resourced and costed for the level of service required, but that the procurement representatives reviewing the documents do not understand the value for money that the offering may represent in the long term due to their lack of experience.

The factors outlined above are leading to consultants and contractors lacking faith in the ability of public sector agencies to run a fair and transparent tender process that focusses on a sustainable value for money contract award with fair risk allocation. The perceived current position of is one of lowest price with maximum risk transfer.

"If we say we want to be fair then we must be fair, and we must consider that we are procuring a partner not a builder"

A lowest price culture leads to the cost of transferring the risk to the contractor being discounted when assessing tenders. Public sector agencies state that even if they can see that the full level of service or the risk transfer has not been costed, who are they to question the consultant's or contractor's price and whether it accurately considers the full level of service they are expecting. This behaviour is unhelpful and will likely result in both parties achieving poor outcomes.

Tenderers, whether they be consultants, main contractors, or subcontractors, are responsible for ensuring they have the right governance overseeing tender submissions and costing and pricing of their proposed solution. Public sector agencies cannot act as the private sector's governor and undertake due diligence for them. It should be able to rely on tender submissions as complete and accurate to meet the project outcomes (to a high standard). However, it is the responsibility of public sector agencies to act reasonably and transparently, undertaking a robust procurement process with high quality tender documentation based on achieving public value rather than lowest price.

Opportunities for improvement: Procurement

Review low cost procurement practices for construction in accordance with Government commitments and the guiding principles of the Accord.

Ensure better follow-up on examples of poor procurement process as part of rebuilding confidence in public sector processes.

6 Contracting for construction

NZS Conditions of Contract and any associated special conditions should not be considered a one size fits all approach to construction contracting. Public sector agencies should consider for each project which contract form is most appropriate, and what special conditions are necessary and appropriate.

Contractors, industry organisations and some legal experts have expressed serious concerns in relation to the special conditions of contract being used by clients, including those in the public sector. These concerns relate to the large numbers of special conditions included in contracts, which are often unexplained and therefore perceived by industry to not be understood by public sector agencies. There have also been cases where public sector agencies have not accepted feedback on special conditions.

More specific concerns relating to the use of time bars, the lack of liability caps and the role of the Engineer to the Contract, which are becoming more common within contracts, have consistently been raised. These are discussed further below.

6.1 Special conditions

The standard NZS Conditions of Contract appear to be well liked by contractors, who are often reticent to adopt other contract forms, such as NEC. While this may be true, contractors are extremely concerned with the extent of amendments made by clients, including public sector agencies. Examples were provided of public sector agencies issuing over 150 pages of special conditions to a contract based on the standard NZS general conditions.

The Entwine Report outlines that the value of standard forms of contract is to *“reduce the risk of counter-productive decision making by either party.”* However, the extent of amendments made to the general conditions is often seen as a way of creating a bespoke contract under the guise of using a standard form of contract. This is creating a false sense of security for some or all parties. The flow-on effect is that project teams have limited understanding of the amendments being made and the risks being transferred.

A recent survey by Russell McVeagh (2018) highlighted that *“the number one factor identified as contributing to disputes is a lack of understanding of contract obligations within the industry, with bespoke contract amendments reportedly not always read and understood by all parties.”*

While lawyers representing public sector agencies are tasked with protecting their client’s interests, it is important that the agencies themselves keep a fair and reasonable view on the conditions of contract they are implementing, and that they fully understand the impact of these. In addition, agencies should clearly articulate the purpose of amendments to the other party, and the other party must be able to comment on the amendments.

A blanket approach seems to be common within the public sector, where the same set of special conditions of contract are being used, most commonly under an NZS 3910:2013 form of contract, for projects that range from minor works projects right through to large projects that are worth over \$50 million.

Some public sector agencies have gone to great lengths to undertake consultation on their special conditions of contract, receiving feedback from the industry and then finalising one single set of special conditions to be used on all projects. While this is an admirable approach, issues remain. One public sector agency advised that now that it had taken on board all feedback received from industry, and

made some alterations to its special conditions, the special conditions will not be amended even if tenderers raise issues with the agency specific to a particular procurement.

In some instances, a standard set of special conditions of contract is used for all projects with an expected value of \$500k or more. This raises concerns as to whether the smaller contractors signing up to a \$500k contract have any understanding of the risks they are assuming. What must also be considered is the value of this risk transfer, as the likelihood of a small contractor surviving a material claim under such a rigid contract is extremely low.

Special conditions of contract require flexibility for different operating environments, and for different types of construction, including complexity and value, to avoid a one size fits all approach. There is, however, a desire to see more guidance and consistency across the public sector when using the NZS contract forms. For example, consistency in bonding requirements, retention schemes, liability caps, warranties and guarantees and risk transfer could be useful to assist contractors in their tendering and contracting processes with public sector agencies.

Given the dynamics of the industry, the use of special conditions of contract and guidance on consistency across the public sector should be regularly reviewed through engagement with the industry.

“Industry is very dynamic and what is an issue today may not have been an issue when contracts were locked in”

Industry has raised concerns where public sector agencies become very defensive if comments on special conditions of contract are raised during procurement. In some cases, tenderers are advised that if they continue to raise comments in future procurements, they will be removed from contractor panels.

As leaders in the sector, public sector agencies must be mature and knowledgeable enough to understand that the raising of issues by tenderers within a procurement, may represent an informed and considered approach to the delivery of the solution, and should not necessarily be considered as a negative during tender assessment. While it is accepted that some tenderers' comments may also reflect a lack of maturity, feedback that identifies discomfort with risk transfer or that identifies flaws in tender documentation should be considered.

6.2 Administrative burden

The administrative burden of public sector construction contracts has increased significantly due to the extent of special conditions. This creates additional cost and risk. Public sector agencies must be proficient in applying the contract conditions and understand the implications these have on project resourcing. Agencies must also ensure that their cost consultants have assessed and allowed for the full cost of resources required by the contractor and its subcontractors in administering the contract, within the construction estimate. Contractors in turn must ensure both they and their subcontractors have sufficient capability and capacity to meet their obligations.

It is essential that public sector agencies understand that if applying special conditions of contract is administratively burdensome, the tenderer's price should reflect this. Agencies should recognise that if the price doesn't reflect this additional burden, then it is highly likely the contractor will fail to meet the full requirements of the contract, and most likely does not understand its obligations under the special conditions in the first case.

Public sector agencies need to be prepared for a contractor to be regularly providing notices and documentation as required under the special conditions. Regardless of the special conditions of

contract, the unamended general conditions of NZS 3910:2013, NZS 3915:2005 and NZS 3916:2013 require such notices and both parties should be prepared to both provide and receive these. Often both public sector agencies and contractors see the issuing of notices as required under the contract as an adversarial approach to managing a contract.

“Kiwī culture is to immediately get defensive when the word contract is mentioned, not recognising that you can have collaboration and still protect contractual positions”

Within a mature market, all parties should understand and appreciate that while in an ideal scenario, they may be working as a combined team in a collaborative manner, there is still a commercial contract that must be followed. This approach should not be perceived as either party acting in an adversarial manner.

6.3 Time bars

The driver for time bars is cost and time certainty for the public sector. It is important for the public sector to have cost certainty throughout a project and to have time to consider whether they proceed with a variation based on identified cost and programme implications. The purpose of time bars in a public sector setting and the responsibility of public sector agencies to act fairly and reasonably when engaging with industry must remain forefront.

Examples were provided where final accounts have taken years to agree and no cost certainty was provided from the contractor to the public sector agency throughout the project (often due to failures to submit variation and extension of time claims). This resulted in unforeseen cost blow outs well after project completion. This kind of project management from the contractor's side suggests a complete lack of care for the public sector agency's position, particularly given that public money and strict appropriations and budgets are involved. The public sector agency must have an opportunity to understand the implications of variations to the project cost and programme within a reasonable timeframe, enabling it to take mitigating actions if required.

However, contractors, industry organisations and some legal experts have expressed serious concerns in relation to what they consider to be a culture of growing contractor disenfranchisement. This was highlighted as occurring where contract provisions are included that seek to impose time bars, through a condition precedent, regarding the right of a contractor to make a claim for a variation or an extension of time. These time bars prevent the contractor claiming for the cost and time impact of variations that are instructed and completed on site, if the contractor has not submitted its claim within a set time.

The disenfranchisement is seen to occur where a contractor has not met the contractual timeframe, often limited to 10 working days. In some cases, the public sector agency requests significant detail regarding the variation within this timeframe. If the contractor fails to meet the timeframe or does not provide the level of detail required (as set out in the special conditions), the agency considers that it is entitled not to pay the contractor for the work in question, despite the contractor still having to complete the work on site, often via subcontractors.

The public sector agency needs to consider the reasonableness of any time bars included in special conditions. For example, it is reasonable to expect notification within 10 working days of a contractor becoming aware that a variation will result in a cost or time impact. It is not reasonable to expect a full breakdown of the costs or a complete updated programme within this timeframe.

In assessing whether a proposed time bar is reasonable to include in special conditions, the public sector agency must consider that to provide a detailed cost breakdown, a main contractor must receive the direction or variation, distribute this to its subcontractors and allow sufficient time for each affected subcontractor to review and assess the implication of the change. Once each subcontractor has reviewed the variation, they need to report any implications back to the main contractor. The main contractor must review all the responses received, go back with any queries if they do not believe the responses are fair and reasonable, and repeat that process until they are satisfied. The main contractor must then compile the full claim, including their own inputs and submit this to the Engineer to the Contract.

It is becoming common practice for Engineers to the Contract to state to both clients and contractors that they will only issue instructions on one day of the week. This results in a culmination of instructions being issued in bulk, each of which may or may not be a variation to the contract. There have been instances where contractors have received twenty or more such instructions in one submission with no alteration to the time bar. Some individual instructions have contained over 100 amended drawings for the main contractor and their subcontractors to review and provide a detailed and reasonable claim back to the Engineer to Contract within 10 working days. If this timeframe is not met the contractor will be required to complete the work but not be entitled to be paid for undertaking the work. This is simply not reasonable.

Industry is now commonly stating that this use of time bars and the perceived growing disenfranchisement regime within the public sector is a means to get something for nothing.

Ideas for more reasonable time bars provided by contractors, clients, and legal advisors:

- The ability for contractors to provide high level estimates on time and cost implications for variations to the contract in the first instance, with variable time bars, which may be longer at the front end of the project but decrease in length as either sub-trade work completes on site or as the work gets close to the project completion date.
- Increase time bars to a minimum of one month to provide high level cost and time implications and allow for exemptions to conditions precedent to be applied for and awarded on a reasonable basis.
- Apply a fixed time bar date of six months as an example, where it has become unreasonable for the contractor to not have responded within that timeframe.
- Fixed timeframes for the final account to be provided and agreed reasonably between the contract parties linked to retention release.

6.4 Caps on liability

The NZS Conditions of Contract do not include any caps on liability in the general conditions. This is a topic that has been repeatedly raised by both contractors and lawyers as an area that requires more consideration.

The contractor's view is that it should not be expected to bear all liability arising from any failure to comply with their contractual and statutory obligations. This is because such liability could go well beyond what they would otherwise earn for completing the work, and that is an unsustainable position for them to take.

The client's view tends to be that it is paying the contractor an agreed price to undertake the work based on the contractor's skill and industry expertise, and a client should not be required to pay any more (whether directly or because of residual liability) for a contractor to complete the project in accordance with the contract documents. There is also concern from clients that if a project is going badly and the contractor approaches or reaches a liability cap, it may decide to walk away from completing the project, leaving the client in a difficult position.

It is apparent that clients and contractors have different views on the inclusion of liability caps and, if included, at what level liability caps should sit and how they should be applied. However, this may be an area in which the public sector can take the lead in the interests of fairness and a sustainable construction sector, and provide guidance to public sector agencies as to when liability caps should be included and the factors to consider when setting such a liability cap.

A contractor having uncapped liability is of no use to a client if the contractor is insolvent and liquidated and this certainly does not contribute to a sustainable construction sector.

*"Consultants
have no skin in
the game"*

Both clients and contractors have raised the issue of disproportionate liability caps between contractors and those of the client's consultants. Contractors have commented that the lack of a contractor liability cap in many construction contracts (meaning the contractor has unlimited liability) has resulted in the contractor being treated as the underwriter of the project, even where the liability does not fairly sit with them.

Clients need to be aware of this issue, and carefully consider what the appropriate liability regime should look like for each consultant they are engaging. For construction only contracts, designers must be prepared to retain overall design liability, and the public sector agency must be prepared to pay these consultants a fair fee for this service.

6.5 Engineer to the Contract

The NZS 3910:2013 and NZS 3916:2013 are not inherently collaborative contracts. This is borne out by the contract having no direct link between the client and the contractor but the link being filtered through an intermediary i.e. the Engineer to the Contract.

The purpose of this role under the contract requires a sound, impartial individual to make judgement calls on what is a fair outcome under the contract, because it is simply not possible to legislate for every outcome prior to commencement of the contract. The standard form NZS 3910:2013 states that *"the Principal⁹ shall ensure that at all times there is an Engineer, and that the Engineer fulfils all aspects of the role and functions reasonably and in good faith"* (Standards New Zealand, 2013).

*"Engineer is governed by
the conditions of contract
and cannot step outside
of the contract
conditions"*

NZS 3910:2013 is very clear that the Engineer has a dual role under the contract, which is to act *"as an expert advisor and representative of the Principal, giving directions to the Contractor on behalf of the*

⁹ The Person named as such in the Special Conditions and includes its executors, administrators, and successors.

Principal...”, as well as “independent of either contracting party, to fairly and impartially make the decisions entrusted to him or her under the Contract, to value the work, and to issue Certificates”.

Feedback was particularly strong that the individuals undertaking the role of Engineer to the Contract are seen to be acting as advocates for the client when there are project issues, rather than remaining independent as required under the contract. This is exemplified where the public sector agency has specifically amended the general conditions to either remove the Principal’s duty of care to ensure the Engineer acts in good faith or to state that the Engineer shall act solely in the benefit of the Principal.

There are also concerns around the dual role of this individual and the perceived pressure of being appointed and paid for by the client when having to make decisions that may not be in the client’s favour.

The industry has raised concerns around the role of the Engineer to the Contract and the perceived independence or lack thereof that is currently occurring:

- Conflict in relation to the dual role of acting as a representative of the client as well as acting impartially in relation to decisions under the contract
- The altering of the role of the Engineer through special conditions of contract to remove the duty of care of the Principal to ensure the Engineer fulfils its role reasonably and in good faith
- Use of a public sector employee to fulfil the role of Engineer
- The inability of the contractor to comment on the named Engineer or raise concerns as part of their tender
- Concerns that the Engineer or its organisation is also acting as the client’s overall project managers, quantity surveyors or designers and the increased conflict of dual roles in this regard
- The lack of focus when appointing the Engineer to the Contract on the individual and their relevant specialist expertise related to the infrastructure project
- The manner that the public sector agency procures this individual through the large consultant panel, which may exclude the expert individuals often best placed to undertake this role.

Common practice within the public sector is to undertake a joint procurement for the role of project manager and Engineer to the Contract from the consultant panels that are currently in place. Equally, joint procurements have been undertaken with quantity surveyors and more traditionally design consultants to include the role of the Engineer to the Contract.

There may be opportunity here for public sector agencies to consider undertaking two separate procurements:

- 1) for an organisation who will undertake their full project management, quantity surveying or design consultancy throughout both the design and construction of the project, including the more day-to-day contract administration, which is generally delegated to the Engineer’s Representative, and
- 2) a separate procurement for the individual Engineer to the Contract.

While this type of approach does not change the dual role set out in NZS 3910:2013 and NZS 3916:2013, it provides more of a focus on the importance of the Engineer as an independent individual and their specific expertise in the type of project being delivered.

During procurement, contractors have raised issues in relation to the Engineer not being named in contract documents. It must be recognised that this individual carries a level of risk that the contractor needs to consider when submitting its tender and public sector agencies must be open to consider any feedback provided by contractors in relation to the named individual.

It is essential that public sector agencies understand the areas in the contract where the Engineer is acting independently of the contracting parties and the duty of care the Principal holds, to allow this independence to occur, without altering the contract conditions to remove this duty of care.

Overall this role (or an equivalent independent role such as an 'expert') is critical for both parties under a construction contract and therefore it is important that the independence of the role remains and that there is a strong focus on the procurement of the individual undertaking the role.

“Engineer has a duty of care to act impartially and you cannot legislate for those engineers that breach this duty of care”

Opportunities for improvement: Contracting for construction

Issue guidance to public sector agencies in relation to good practice special conditions. This could include clear guidance on the obligations of the Engineer to Contract.

Follow-up with public sector engaged legal advisors in relation to expectations of fair risk transfer when drafting special conditions of contract.

Consider ideas for more reasonable time bars, and provision of guidance on determining appropriate liability caps.

Ensure that public sector agencies take a firm and consistent approach to engaging the Engineer to the Contract and consider a separate procurement for the individual, outside of the core project team consultants.

Consider establishing a panel of individual experts who can be procured for the role of Engineer to the Contract. Panel members should be agreed between public sector agencies and industry and include the ability of individuals to join the panel at any point in time to remove barriers to market.

7 Risk transfer

The New Zealand construction market has seen four large contractors withdraw from the market or sold in part in the past two years due to unsustainable losses, with, as some suggest, the risk of further closures. This is not sustainable within such a small market.

There are a number of factors contributing to the losses and closures, including poor or no internal governance and poor quality workmanship leading to significant defects and subsequent litigation. Examples include H Construction North Island Limited and Fletcher. H Construction North Island Limited was recently found liable for defects at the Botany Downs Secondary College and damages were ordered in the sum of \$13.4 million (Campbell, 2018). One of the reasons for Fletcher's issues was reported to be poor governance (Oram, 2017; New Zealand Shareholders Association, 2018). However, two factors that public sector agencies have a direct influence over were seen to contribute significantly to these losses:

- lowest price driven procurement, and
- an unsustainable risk transfer culture.

These factors were also found to be key factors in the Carillion collapse in the United Kingdom (House of Commons, Public Administration and Constitutional Affairs Committee, 2018).

The concerns raised by industry in relation to risk transfer from both public and private sector clients are well documented. A survey undertaken by the New Zealand Institute of Quantity Surveyors (NZIQS) (2018) indicated that 92% of respondents believe there is a risk allocation problem within the sector.

Contractors have stated that they are not averse to risk transfer as a concept and are happy to take on risks, providing they are risks that they have control of and can manage, and they are able to include reasonable associated costs for managing the risks in the contract sum. Contractors feel that too often there are risks being transferred that are entirely out of the contractor's control and therefore the contractor has no viable means to mitigate or influence that risk.

Unreasonable risk transfer examples

- The contractor is deemed to account for any errors and omission within the contract documentation, including the designers' drawings and specifications, in a construction only contract.
- Transfer of operational risks where the risk of construction works having to cease at any time for any operational reason is transferred to the contractor. Contractors are not able to manage or mitigate the risk of operational activities requiring works to cease due to the public sector's operational activities. Examples include, works having to cease for an exam at a school or university, or a full lock down in a prison, school, university or hospital.

The transfer of a specific risk to the contractor must be fully considered, based on the ability of the contractor to manage the risk and its cost, and whether transfer represents better value for money to the public sector, than if retained. In some cases, the transfer of risk at a price premium may offer better value for money, given either time or cost certainty considerations. The cost and value of such risk transfer should be provisioned for and the reasoning behind such provisions discussed with project governance.

Public sector agencies must consider the implications of a contractor accepting full risk transfer under special conditions, without pricing that risk, just to win the work, and then being subsequently awarded further projects across the public sector, based on a similar approach. The risk exposure and the costs of this, should the contractor fail, could be significant for the public sector, as well as private sector clients who have also engaged that contractor.

Lack of consideration of risk exposure across the whole of government was a key finding following the collapse of Carillion and is something that the public sector should take into consideration when assessing risk transfer and the capability of a limited number of contractors to sustain such a transfer. The Carillion Inquiry report stated that *"The Government has deliberately promoted an aggressive approach to risk transfer to the private sector - often even attempting to transfer risks that the government itself has completely failed to analyse or to understand."*

On the flip side, some clients and consultants have commented that previous experience has shown that where risks have not been transferred, contractors have taken a blasé and hands-off approach to assisting with risk management. Often where a client has retained a risk, and that risk occurs (a simple example is inclement weather), there are steps that the contractor can take to assist in mitigating its impact. Public sector agencies have given examples of where contractors have stated outright that it is not their problem and have shown no willingness to assist in managing agency retained risks.

This has resulted in a lack of trust and driven the risk transfer approach on future projects. It reflects on the leadership of all parties to the contract and drives a poor culture within project teams. Infrastructure projects require a level of maturity from all parties to act together in a fair and reasonable manner. There must be an understanding that construction is a dynamic environment that often encounters unforeseen issues, requiring all parties to work together flexibly and collaboratively. This culture seems to have been lost and has morphed into a very adversarial, each party for themselves, approach.

While unreasonable (even if clear) risk transfer, alongside an aversion from some public sector agencies to see this being priced, has been identified as a major issue within public sector contracting, a further issue is what the industry is commonly phrasing *"risk transfer by stealth"*.

7.1 Risk transfer by stealth

Risk transfer by stealth is a phrase often used when referring to the transfer of risk, not through special conditions of contract, but buried in appended documents such as design specifications, fire reports and geotechnical reports. This is another key issue contributing to a lack of trust.

There are many examples of this risk transfer by stealth, the most common being the transfer of ground risk where geotechnical reports are provided as part of the tender documentation but have no reliance clauses inserted. The contractor is effectively taking the full risk of the ground conditions without the ability to rely on the information in the geotechnical reports or the ability to undertake its own investigation. While the contractor may be happy to accept this type of risk transfer, there is a cost associated with this. Cost consultants should consider this when providing estimates to public sector agencies, as well as when assessing tender prices.

More recently under construction only contracts, items such as the design of seismic restraints are being transferred from design consultants to the contractor. This requires a contractor to engage its own structural engineer to complete the design, at the same time as the client has already commissioned a structural engineer to undertake full design. In other cases, the fire risk reports have also been passed to the contractor, despite the client engaging expert consultants to prepare these reports for them. Too

often information is being included within design consultants' documentation with "no reliance" clauses, and in many cases without the client understanding the implications.

Transferring design obligations from the designers to the contractor by stealth is not helpful. It is not feasible or productive for contractors to be employing their own designers under a construction only contract. This duplicates resource, which the public sector ends up paying for. There should be no misconception that contractors and their site based staff are trained in design. They may provide buildability and efficiency suggestions to assist through construction, but they do not hold the skills to take the risk of design in a traditional construction only contract setting.

The attempt to transfer all or any of the design risk to the contractor under a traditional construction only contract, results in a lack of contractor participation in providing ideas, and a culture of *"I am just the builder, I will do exactly what you tell me"*, in order to avoid any perception that it is accepting that risk. This approach loses any flexibility and input the contractor might have previously provided in a fairer risk transfer environment.

To minimise risk transfer by stealth, public sector agencies must ensure the consultants engaged are undertaking their roles fully, providing thorough documentation, without caveats, and are not attempting to transfer design risk to the party least able to manage it.

The clear message from contractors is that if public sector agencies wish to transfer all or part of the design risk to the contractor, they must be transparent about it and utilise an appropriate contract form, such as a design and build contract and not a construction only contract.

Key questions for more transparent risk transfer

- Has each project risk been assessed and has it been determined, in an informed manner, who is best able to manage that risk?
- Is there a transparent risk transfer table that was signed off as part of the business case? Is it aligned with the agreed budget, procurement approach and contract form intended?
- Is there a transparent risk transfer table included in the tender documentation for both consultants and contractors?
- Is an assessment of the ability of the parties to manage the transferred risk included within the tender evaluation plan?
- Has the consultant engaged by the public sector agency met its obligations to provide complete and accurate documentation and manage its risks? If not, what is the impact on the agency and contractor's ability to manage their retained and transferred risks?
- What reliance can be placed on the work of the consultant engaged by the public sector agency? If no reliance can be given, what value was associated with the work in the first place, and is it clear that, with respect to time and cost, this work may need to be repeated by the contractor?
- Have any amendments to the risk transfer table, been approved by project governance? What is the impact of the amendments on the agreed procurement approach and contract form? Is this approach still valid?

Some contractors are now developing their own matrix of design responsibilities to be added to contract documents to take precedence over specifications and drawings in an attempt to avoid lack of transparency in design risk transfer. This type of matrix clarifies the ownership of the provision of producer statements and the ultimate responsibility for verifying the design for the project as remaining with the designers.

Public sector agencies are starting to respond to feedback on transparent risk allocation with some agencies including in contract conditions a specific list of any design risk transfer to avoid a transfer by stealth. While this addresses the issue in part, the concern regarding the appropriateness of overall design risk transfer under a construction only contract remains.

7.1.1 Early Contractor Involvement procurement

Early Contractor Involvement (ECI) procurement has traditionally been used to engage with a contractor during the design phase of a project providing early input into programme and buildability issues. The contractor is engaged for a fee through an ECI agreement that is competitively tendered.

This type of procurement is often used when the construction is particularly complex, or where more upfront certainty around staging and programme is required. Examples include, large seismic upgrades, constrained sites or fully operational sites where staging of construction is critical. This type of procurement has not generally included a contractor design responsibility.

There is an emerging trend where a contractor having taken part in an ECI contract is being held to account for design issues that later occur during construction, despite not being engaged under a design and build contract, or where the ECI engagement did not include a design peer review. In addition, contractors are often requested to assist in value engineering during the ECI phase, or sometimes during construction in the absence of an ECI phase. As a result, contractors are becoming more and more wary of providing any form of assistance in value engineering in an attempt to avoid bearing any risk if their suggestions do not work. This erodes the value added from early engagement in ECI procurement.

The fundamental premise is that if a public sector agency is procuring under a construction only contract, the contractor is not responsible for design. If suggestions are made during ECI or during value engineering, it is the designer's responsibility to assess whether these suggestions will work with their design and advise the client accordingly. Risk transfer of design to a contractor is neither productive nor sustainable, unless it has been expressly stipulated through a design and build contract.

7.1.2 Performance specifications

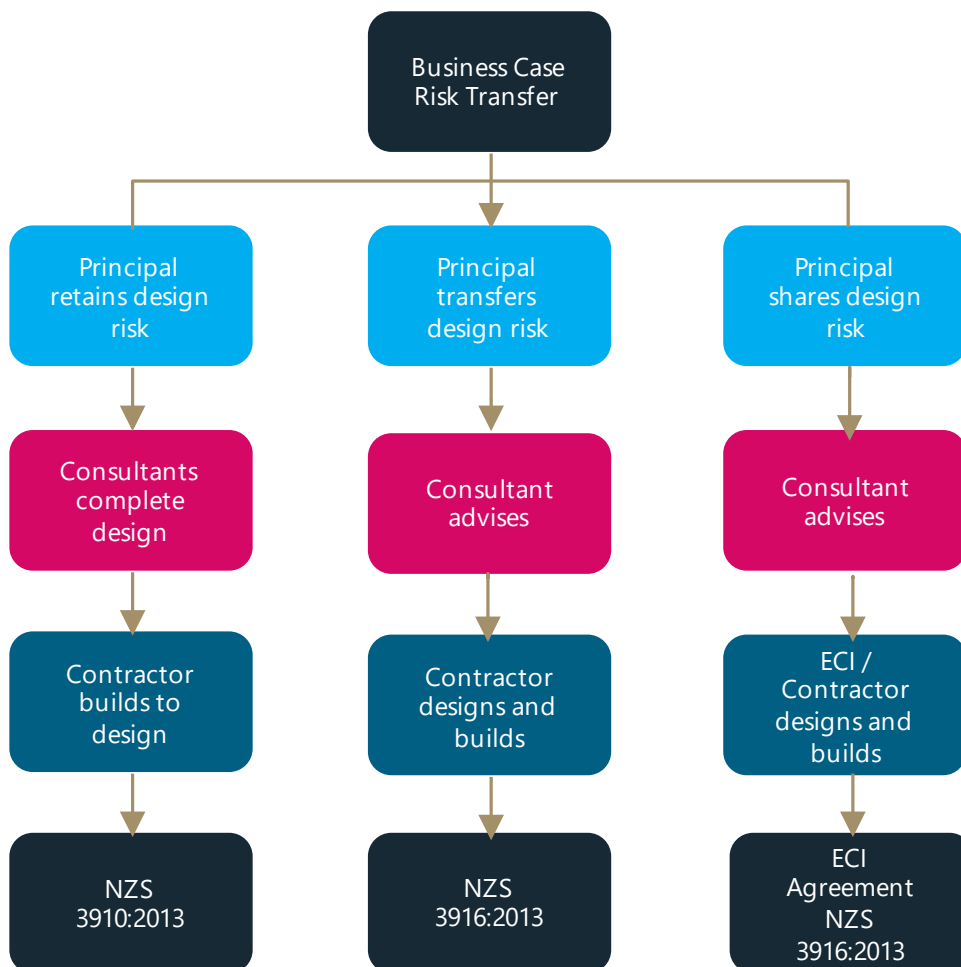
Another common approach to risk transfer through design is the use of performance specifications. Consultants are more commonly providing performance specifications, particularly for services trades, rather than a full design. This requires the main contractor, generally through their subcontractor, to design to meet the performance requirements of the consultant's performance specification.

While this practice has become common within the industry and is widely accepted due to the specialist nature of some services' trades, this does not mean the design risk transfer is an accepted practice. Consultants should be prepared to receive the contractor's design, based on the initial performance specification, prior to any of the relevant work commencing on site. Consultants should provide verification that they are satisfied that the proposed design will meet their performance specification requirements and therefore retain the design risk.

Too often consultants engaged by public sector agencies will take a hands-off approach and utilise a commissioning consultant to assess the final installation against performance specifications to determine if the design is acceptable once the service installation is complete. This is too late.

Figure 2 below illustrates a simple alignment between the public sector agency's business case risk transfer (as budgeted and aligned with its procurement approach) and the retention or transfer of design risk, the role of the consultant, the contractor and the form of contract.

Figure 2: Risk transfer and contract form



Opportunities for improvement: Risk transfer

Issue guidance in relation to risk transfer, its purpose and management, and the potential impacts if risk is inappropriately transferred. This guidance could require risk transfer to be fully assessed and signed off at an executive level.


Public sector agencies should assess the level of risk transfer held by individual contractors across all public sector projects that they are undertaking.

In approving business cases for investment, consideration should be given to the appropriateness of risk transfer and its alignment with the procurement and contracting approach. This should include a transparent risk transfer table together with cost and time implications to ensure that informed decisions can be made at an executive level as to whether the risk is retained, shared or transferred.

The risk transfer outlined in the business case should then be reflected in the tender documentation for both consultant and contractors to ensure the risk apportionment is transparent. The tender analysis should include an assessment of the ability of the contractor to manage the risk and the costs and time associated with this.

Guidance should be provided to public sector agencies on the different forms of contract available in the market and the most appropriate form to use based on the type and complexity of a project and the risk transfer proposed.

The use of the Early Contractor Involvement (ECI) procurement model in the public sector should be examined as part of MBIE's revised Construction Procurement Guidance.



Appendix A
Reference list

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Appendix B
Comparison of construction standards

NZS 3910:2013 & NZS 3916:2013 vs NZS 3915:2005

This table outlines the difference between the standard where it is administered by the Engineer to the Contract compared to being administered by the Principal (NZS3910/16:2013 vs NZS3915:2005).

NZS 3910:2013 & NZS 3916:2013	NZS 3915:2005
<p>Utilise an Engineer to Contract, who must be a natural person.</p> <p>The Engineer is not a party to the Contract and is appointed by and paid by the Principal.</p>	<p>Does not utilise an Engineer – instead it utilises a Principal’s Representative.</p>
<p>The Engineer acts as the overall contract administrator, but has dual roles in this regard (see section 6 of NZS 3910:2013), which are:</p> <ul style="list-style-type: none"> to act as the Principal’s agent, including acting as expert adviser to the Principal, giving directions on behalf of the Principal, supervising the works and generally looking after the Principal’s interests in the performance of the Contract; and to act as an independent certifier, responsible for valuing claims and issuing certificates. 	<p>The Principal’s Representative administers the Contract directly and gives directions and instructions to the Contractor on behalf of the Principal, as well as approving payment claims or issuing payment schedules itself. The Principal’s Representative also determines the value of any variations, assuming the parties cannot first agree the valuation.</p>
<p>While acting in its capacity as the Principal’s agent, the Engineer is only obliged to look after the Principal’s interests under the Contract and binds the Principal when acting within the Engineer’s authority.</p> <p>While acting in its capacity as the independent certifier, the Engineer has an obligation to act fairly, impartially, honestly, in good faith, and as an independent person exercising his or her professional judgment.</p>	<p>The Contractor effectively deals with the Principal’s Representative in the same way it would deal with the Engineer under an NZS 3910:2013 contract, but the Principal’s Representative does not have the dual role that an Engineer has, and the Principal’s Representative has no obligation to act independently, impartially or fairly when administering the Contract.</p>
<p>The Engineer also has a role to play in the dispute resolution process, with the parties able to request a formal review of most decisions, valuations and certificates.</p>	<p>With no Engineer to decide disputes arising under the Contract, the parties must instead agree on an Expert to hear their dispute. Either party may refer the dispute to the Expert, who will issue a determination of the issue in writing (including reasons for the decision) within the timeframe set out in the Contract. This decision is final and binding, unless it is referred to mediation or arbitration. The Expert may be nominated in the Special Conditions prior to contact signing or may be appointed by agreement between the parties in relation to a particular dispute when it arises.</p>
<p>The Principal is obliged to ensure that the Engineer fulfils all aspects of the role and functions reasonably and in good faith. In the unamended NZS 3910:2013 clause 7.1, the Principal indemnifies the Contractor against any loss suffered by the Contractor from any act or omission of the Engineer. The Principal would be likely to seek to recover any such losses from the Engineer, but the ability of the Principal to recover will largely depend on the terms on which it has engaged the Engineer, including any limitations on the Engineer’s liability</p>	

Overlay of Construction Contractors Act

Despite the express contractual dispute processes contained in each of NZS 3910:2013, NZS 3916:2013 and NZS 3915:2005, nothing prevents a party referring a dispute to adjudication under the Construction Contracts Act 2002 at any time. Adjudication provides a fast-track dispute resolution process, which may run in tandem with the contractual processes.



Appendix C
A mature construction sector

Clients, consultants and contractors in a mature construction sector

This table outlines what a mature construction sector would look like for clients, consultants and contractors.

Client	Consultants	Contractor
Structured governance with executive level understanding of infrastructure projects/obtaining independent construction advice	Provision of sound, competent advice to the client team that is suitable for the project in question	Robust tender that is costed and programmed correctly, risks are well understood and issues with risk transfer raised without unreasonable tender tags
Accurate business case content with realistic cost and programme expectations	Pre-construction programmes that realistically and efficiently allow for robust planning and documentation	Efficiently managed construction with a culture of assisting the entire project team to achieve the project outcomes
Ability to respond to unrealistic pressures to speed up delivery for political purposes	Provision of fully coordinated complete design information and limited changes to the design during the construction phase	Collaborative rather than claims focused on-site delivery
Capacity and capability to resource for the delivery of infrastructure projects	Taking full responsibility for their scope of work and area of expertise. Ensure risk transfer is appropriate and transparent.	Ensuring sufficient resource is available and engaged on the project (e.g., contract admin staff as well as sufficient labourers).
Robust procurement of consultants (including Engineer to Contract role) and contractors that does not drive a lowest price mentality		Procurement of high quality subcontractors with suitable skills, capacity and experience to undertake the works
Clear and adhered to tender evaluation methods, understanding of exit price as well as entry price when evaluating, and ability to discuss issues raised and to negotiate with tenderers in a fair and reasonable manner		
Fair and reasonable contract conditions, transparent and reasonable risk transfer and acceptance of independence of Engineer to Contract		Appropriate risk management and an awareness of assisting the client where possible to mitigate the impact of any client retained risks
Professional and well executed contract administration	Professional and well executed contract administration	Professional and well executed contract administration
Collaborative and fair mindset with best for project approach to ensure success for all parties	Collaborative and fair mindset with best for project approach to ensure success for all parties	Collaborative and fair mindset with best for project approach to ensure success for all parties
Channel for project leadership to raise and discuss concerns	Channel for project leadership to raise and discuss concerns	Channel for project leadership to raise and discuss concerns

