

# NZS 3916: THE GAME OF CONTRACTS

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## **ABSTRACT**

At the end of 2018 the NZS 3916 contract (*Conditions of contract for building and civil engineering – Design and construct*) had its 5th anniversary. This document is commonly used to facilitate the legal agreements for design and build projects. Design and build procurement has become increasingly common in New Zealand in recent years. Although creating tailored standards for different contract options has been a forward step for the infrastructure industry, after 5 years it is time to take stock and assess the standard from the experience of the Principal, Contractor and Consultant.

This paper will briefly step through the creation of the NZS 3916, provide international context of design and build contracts in terms of current trends and alternatives, and highlight the key differences between the NZS 3910:2013 and the NZS 3916:2013.

Using the experiences and perspectives of Principals, Contractors and Consultants in the water and wastewater field, the common use and applicability of NZS 3916 is then evaluated. The advantages and challenges of the contract are discussed as well as potential improvements in the next contract review which could benefit the industry. The discussions presented in this paper are supported by observations made through various water and wastewater projects which Harrison Grierson have been involved in.

As more projects are utilising design and build contracts, it is important to know how to optimise the tendering process and create a positive experience for all parties involved. The opinions presented in this article are samples of various individual practitioner's views and therefore do not represent Harrison Grierson views.

## **KEYWORDS**

**NZS 3916, NZS 3910, design and build, construction-only, Tender, contract**

## **PRESENTER PROFILE**

Gabriela is a Graduate Process Engineer with experience in water treatment plant design, cost estimation, site observation and assistance and preparing a range of documentation for Councils. She has worked with the NZS 3916 on several projects, including being responsible for tender documents preparation and tender evaluation.

Natalie is a Graduate Process Engineer in Harrison Grierson's water and wastewater team. She has been involved in an array of work including strategy and optioneering, concept level design, consenting and construction monitoring. She is interested in understanding Principal, Contractor and Consultant perspectives to achieve a comprehensive understanding of projects.

# 1 THE CREATION OF NZS 3916

NZS 3916 was the first contract standard specifically tailored for design and build procurement in New Zealand. In this kind of contract, the Contractor is responsible for both the design and the construction of the contract works.

The infrastructure sector in New Zealand experienced a growing interest in design and build procurement in the 2000's. The increasing popularity of this type of procurement was a global trend and made its way to New Zealand's market. In that period, water and wastewater treatment plants could only be procured using design and build through:

- Modifying New Zealand standards (e.g. NZS 3910:2003 and NZS 3915:2005);
- Utilising international design and build contracts;
- The formation of alliances to deliver projects;
- Two separate contracts: a design contract which was then followed by a construction contract.

As these were the only options available, a cohesive design and build contract that incorporated the characteristics of the New Zealand industry and legislation was lacking.

This need was identified by the Standards NZ Committee during the 2011 review of the NZS 3910. The Committee's decision to create a national design and build standard was supported by feedback received from the construction sector and an analysis prepared by the Engineering Leadership Forum (Standards NZ, 2013). Following revision, the NZS 3910:2003 was superseded by three new contract standards:

- NZS 3910:2013 Conditions of contract for building and civil engineering construction;
- NZS 3916:2013 Conditions of contract for building and civil engineering – Design and Construct;
- NZS 3917:2013 Conditions of contract for building and civil engineering – Fixed Term.

These contracts were made available to the public in 2013, 10 years after the last review of the NZS 3910.

Using the NZS 3910:2013 as a basis, the Standards NZ Committee formed the new NZS 3916:2013 with modifications to meet design and build project requirements. The Committee plans to revise this contract in the future following feedback from the New Zealand construction industry (Standards NZ, 2013).

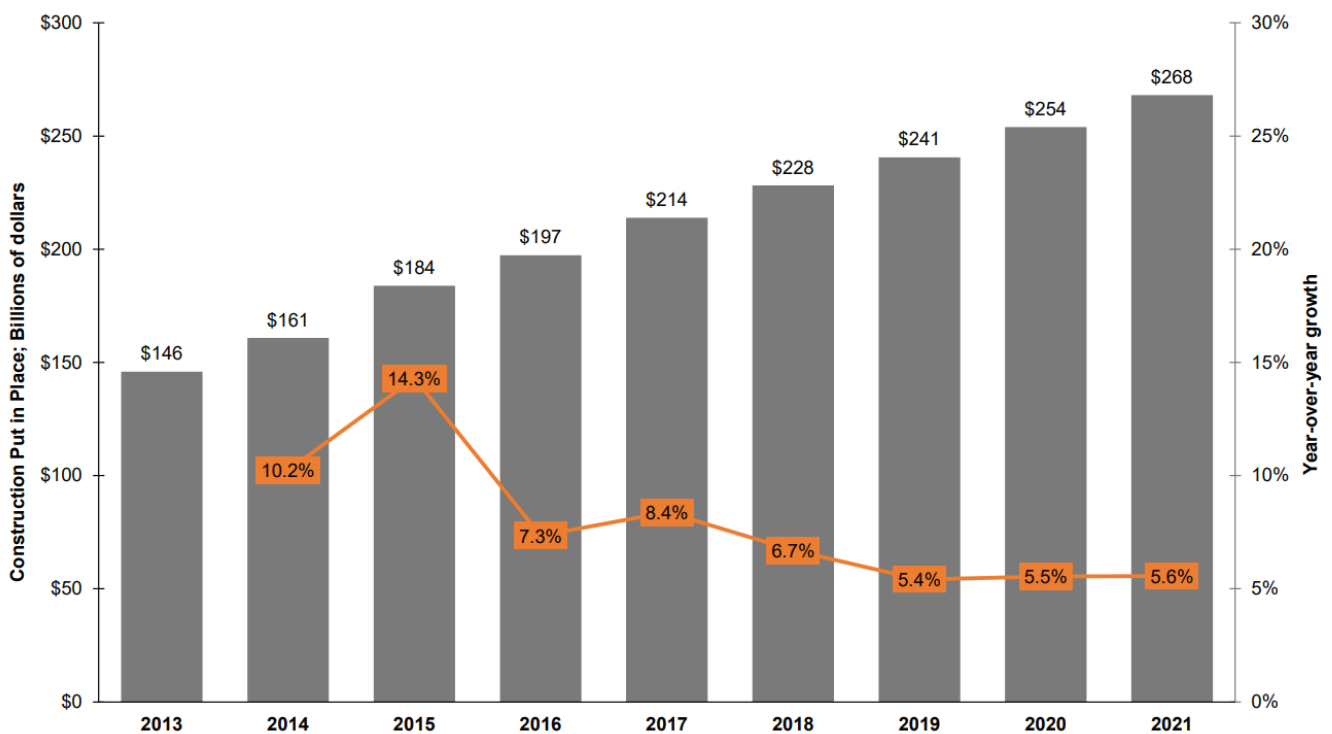
The market reaction to the creation of the NZS 3916 has been mostly positive. Since the introduction of this contract standard, the number of Clients and Consultants adopting it for new projects has steadily increased. As a result, other types of procurement and international design and build standards are losing favor in the local market. Although the NZS 3916 still has room for improvement, the general feeling is that it was a significant step forward for the construction industry in New Zealand.

## 2 DESIGN AND BUILD TRENDS AROUND THE WORLD

There is limited data showing the proportion of projects completed with design and build procurement in New Zealand. The national construction industry has been adopting this kind of procurement more slowly than leading economies, such as the United States (US) and China, however, it is becoming increasingly popular in the water and wastewater treatment field. One of the reasons for this rising popularity could be the Principals' interest in transferring risk to another party.

The American infrastructure industry is a good example where there is a strong presence of design and build construction projects. According to a recent study prepared by a leading infrastructure corporation, Fails Management Institute (FMI), 45% of non-residential projects in the US will use design and build procurement in the 2018-2021 period (FMI, 2018). Design and build spending in this sector is expected to continuously grow from 2013 to 2021, as shown in Figure 1.

Figure 1: Spending on non-residential design and build construction projects in the United States (FMI, 2018).



Design and build contracts standards have also been widely used in the United Kingdom (UK). A construction survey in this region identified that 37% of Clients, 43% of Contractors and 41% of Consultants or advisors used design and build procurement in the majority of their projects in 2018 (NBS, 2018).

New Zealand is still far from achieving such a high level of design and build presence. It is uncertain if design and build procurement will conquer such a large share of the national market, but the introduction of NZS 3916 may cause an increased adoption of procurement.

### 3 CONTRACT ALTERNATIVES FOR DESIGN AND BUILD

Once design and build has been selected as the best procurement option for a project, the next step is determining which contract standard is most appropriate. The choice often depends on the Principal and Consultant’s familiarity with NZS 3916 and the alternative options.

Table 1 below summarises the main contracts used in New Zealand for design and build of water and wastewater assets.

*Table 1: Contract Options for Design and Build in the Water and Wastewater Industry.*

<b>CONTRACT STANDARD</b>	<b>OWNERSHIP</b>	<b>ORIGIN</b>	<b>LATEST VERSION</b>	<b>UNIQUE FEATURES AND GENERAL COMMENTS</b>
NZS 3916	Standards NZ	New Zealand	2013 (1 <sup>st</sup> ed)	Tailored for the local construction industry and legislation. Based on a well-known national contract standard (NZS 3910).
Plant and Design-Build Contract (Yellow Book)	FIDIC (International Federation of Consulting Engineers)	International	2017 (2 <sup>nd</sup> ed)	One of the most commonly used design and build contracts around the world.
Conditions of Contract for Design-Build and Turnkey (Orange Book)	FIDIC (International Federation of Consulting Engineers)	International	1995 (1 <sup>st</sup> ed)	Suitable for projects where international tenders are invited to bid. It can be modified to be used with domestic tenders.
NEC4 - Engineering and Construction Contract	Institute of Civil Engineers	UK	2017 (4 <sup>th</sup> ed)	Very flexible, with a good separation between core clauses and optional clauses. Additional procedures for the identification of opportunities.
AS 4902-2000 (General Conditions of Contract for Design and Construct)	Standards Australia	Australia	2000 (1 <sup>st</sup> ed) Amended in 2005	The Australian Standards are well known in New Zealand. Previously published as AS 4300-1995.

AS 4910-2002 (General Conditions of Contract for the Supply of Equipment with Installation) modified for design and build	Standards Australia	Australia	2002 (1 <sup>st</sup> ed) Amended in 2005	The Australian Standards are well known in New Zealand. Requires additional modifications to be suitable for design and build. Supersedes AS 2987 to 2988-1987.
Contract standards developed internally	Internally developed for one specific company	New Zealand	-	Attend the specific needs of the company and can be more frequently reviewed. Must be comprehensive and well written to have a fair risks distribution and to legally protect all the parties. Not always prepared by specialists or with expert advice.

## 4 KEY DIFFERENCES BETWEEN NZS 3916:2013 AND NZS 3910:2013

NZS 3910:2013, a construction-only contract, remains the most popular standard used by the infrastructure sector in New Zealand. As the NZS 3916 is based on this contract, it is important to understand the key differences between these two standards. This will ensure the most appropriate contract is used for each project.

The main differences between NZS 3916:2013 and NZS 3910:2013 are detailed below.

### 4.1 RISK OWNERSHIP

One of the key differences between a construction-only and a design and build contract is the risk distribution among the involved parties.

In a construction-only contract, the Contractor is not liable for any fault in the design prepared by other parties, as this responsibility has been previously fielded by the Client and in some cases shared with the Consultant. Whereas, in a design and build contract, the Contractor holds sole responsibility for both design and construction of the contract works. Since the Contractor takes a larger share of the risks in this kind of procurement, they may add a price premium to their offer.

### 4.2 INCREASED DESIGN RESPONSIBILITIES

Typically, as the Contractor is not responsible for a large share of the design in construction-only contracts, details about any design documentation to be provided are not included in NZS 3910.

In contrast, NZS 3916 gives guidance about all design documentation expected from the Contractor. This must be comprehensive, suitable for obtaining the required producer

statements and licences, and contain sufficient details to prove compliance with the Principal's Requirements. This design documentation can include calculations, drawings, specifications, construction methodology, models, data analysis, functional description, mass balance, design report and more. The minimum documentation required for the project is normally listed in the tender documents.

It is the Contractor's responsibility to ensure that any Sub-contractor engaged to undertake part or the totality of the design has appropriate experience and qualifications to complete the works to the required quality standards.

### **4.3 PRINCIPAL'S REQUIREMENTS**

Detailed design specifications and drawings are often included in NZS 3910. This design documentation must provide enough information to enable the Contractor to build the contract works.

In NZS 3916, this specific design documentation has been replaced by the Principal's Requirements, which:

- Should state the purpose and performance requirements for the contract works;
- May include outline or preliminary design, design concepts for the contract works, and the Principal's time, cost and quality objectives for the contract works;
- May include drawings, specifications, or other design documents prepared by or on behalf of the Principal (Standards NZ, 2013).

The Contractor is required to develop the full plant design based on this information.

The Client is not liable for any ambiguities, errors or inaccuracies in the design included in the Principal's Requirements or in any drawings or specifications prepared by, or on behalf of, the Principal. Therefore, the Contractor must accept responsibility for any prior design prepared by, or on behalf of, the Principal.

When working with NZS 3916, it is recommended that the Contractor analyse the Principal's Requirements documentation carefully during the tendering stage and raise any issues with the Client. The design requirements and specifications included in the Tender documents can be modified as a result of negotiations between the Client and the Contractor. If there are discrepancies, the Principal's Requirements always takes precedence over the Contractor's Tender.

### **4.4 ENGINEER'S DESIGN REVIEW**

Under NZS 3910 the Engineer may review any design documentation prepared by the Contractor, if any, but no legal obligation is currently specified.

In NZS 3916, there are specifications for reviewing the design prepared by the Contractor. This review is undertaken by the Engineer to the contract and usually takes place at the end of each design stage. The Engineer may seek clarification or changes to the design. Additionally, they have the authority to reject the design if, using reasonable judgement, it fails to comply with the Principal's Requirements.

The Engineer has a default time of 10 working days to review any submitted documentation. This reviewing period can be changed in the 'Special Conditions of Contract' section. If any design document is rejected, the Contractor has 10 working days (or an extended period approved by the Engineer) to make the required amendments and resubmit the documents. Following this, the Engineer has an extra 10 working days

for the new review. Both Client and Contractor have the right of disputing the Engineer's decision of rejecting the design, and this dispute is taken to an independent expert.

The Engineer has 10 working days to approve or reject the design documentation. The construction works may proceed after receiving approval or if the Engineer fails to respond within this period. Although the Engineer is entitled to review and approve the design, NZS 3916 states that they are under no obligation to identify errors, omissions and non-compliances. No review or approval from either Engineer or Client relieves the Contractor of design liability.

#### **4.5 PAYMENT ARRANGEMENTS**

There are three payment methods in the NZS 3910: lump sum, cost reimbursement, and measure and value.

Measure and value payment arrangements are rare for design and build contracts, therefore this option has been removed from NZS 3916.

#### **4.6 CONSENT APPLICATIONS**

In NZS 3916, there is improved clarity around licence responsibilities and how they are shared between Principal and Contractor.

A new clause which allows the Principal to terminate the contract 'for frustration' has also been introduced to NZS 3916 for cases where unacceptable consent conditions have been imposed by public authorities.

#### **4.7 UNDERGROUND AND ABOVE-GROUND UTILITIES**

In NZS 3910 the responsibility for locating underground and above-ground utilities (e.g. pipes, cables and survey marks) has been assigned to the Principal. This responsibility has been transferred to the Contractor in NZS 3916. Therefore, in this standard there are no grounds for raising a variation if utilities positions differ from initial investigations.

#### **4.8 DEED OF NOVATION**

There is a possibility for transferring previous agreements between Principal and Consultant to the Contractor in projects governed by NZS 3916. This is advantageous to the Contractor, as they will have legal grounds against the Consultant in case of design defects and the ability to share the design risk.

An extra form for novating this kind of contract has been included in the NZS 3916 Schedules. Where the Principal expresses the intention of transferring their contract with the Consultant in the Special Conditions, the Deed of Novation Schedule (Schedule 17) shall be used to legalise the transferal.

#### **4.9 INTELLECTUAL PROPERTY**

NZS 3916 contains extra clauses which clarify that all new intellectual property created during the contract period, including the assets design, will be jointly owned by Principal and Contractor. Both parties shall grant each other unrestricted use of the new intellectual property.

The design and build contract also establishes that Principal and Contractor must grant the other party access to all pre-existing intellectual property which is necessary to carry out and maintain the contract works.

## 4.10 CONSTRAINTS ON VARIATIONS

Differently to NZS 3910, NZS 3916 provides the Contractor with the right to notify the Engineer of any negative impacts associated with new variation orders. This includes adverse impacts on safety, compliance with the Principal's Requirements and the ability to obtain and comply with any licences, guarantees and warranties required by the contract.

After receiving a notice from the Contractor, the Engineer can either cancel, modify or confirm the variation order.

## 4.11 PROFESSIONAL INDEMNITY INSURANCE

Professional indemnity insurances cover loss or damage caused by faults in the Contractor's design. Both contract standards (NZS 3910 and NZS 3916) contain very similar clauses for professional indemnity insurance. Under NZS 3916, as the Contractor is responsible for the design, they will normally be required to obtain this insurance.

Contractors working under NZS 3910 may only be required to obtain professional indemnity insurance if they are responsible for a significant portion of the design.

The level of cover required for each contract is specified by the Principal in the 'Special Conditions of Contract' section.

## 5 NZS 3916 IN ACTION

NZS 3916 has been gradually adopted by the industry for the past five years for design and build projects. There have been project successes, challenges tackled, and lessons learned from the application of this contract standard. Table 2 below lists some of Harrison Grierson's projects using NZS 3916.

*Table 2. Examples of Harrison Grierson projects governed by NZS 3916 in the water and wastewater field.*

<b>WHITIANGA WATER TREATMENT PLANT</b>	
<b>CLIENT</b>	Thames-Coromandel District Council (TCDC)
<b>CONTRACTOR</b>	Masons
<b>DESCRIPTION</b>	Upgrade of the WTP to improve treated water quality and increase production. The design included considerations allowing for further future expansion and ability to operate within a range of capacities (transient population).
<b>APPROX. VALUE</b>	\$3m
<b>COMPLETED</b>	May 2019
<b>WHAKAMARU WASTEWATER TREATMENT PLANT</b>	
<b>CLIENT</b>	Taupo District Council (TDC)
<b>CONTRACTOR</b>	Innoflow
<b>DESCRIPTION</b>	Installation of a new WWTP to increase capacity and meet consent requirements. The treatment process consists of septic and pre-anoxic tanks, recirculation tanks and packed bed reactors.
<b>APPROX. VALUE</b>	\$500k
<b>COMPLETED</b>	January 2019



### **WAVERLEY WATER TREATMENT PLANT**

<b>CLIENT</b>	South Taranaki District Council (STDC)
<b>CONTRACTOR</b>	Filtec
<b>DESCRIPTION</b>	Installation of a new WTP to improve the quality and safety of drinking water. The upgrades include pre-chlorine dosing, greensand filters, UV reactors, a second dose of chlorine to achieve residual disinfection and fluoride dosing.
<b>APPROX. VALUE</b>	\$2 million
<b>COMPLETED</b>	Project tendered. Detailed design in progress.

### **CROMWELL WASTEWATER TREATMENT PLANT**

<b>CLIENT</b>	Central Otago District Council (CODC)
<b>CONTRACTOR</b>	Downer NZ
<b>DESCRIPTION</b>	Upgrade of the WWTP to increase capacity, improve effluent quality, and comply with the new resource consents while being flexible to cater for variable flows.
<b>APPROX. VALUE</b>	\$6 million
<b>COMPLETED</b>	2017 – 2018, operation contract completion date in 2020.

### **WAIHI/PAEROA WATER TREATMENT PLANT UV PEROXIDE**

<b>CLIENT</b>	Hauraki District Council (HDC)
<b>CONTRACTOR</b>	Filtec
<b>DESCRIPTION</b>	Installation of UV peroxide plants at Waihi and Paeroa WTP's. These were the first installed in New Zealand and are used to remove taste and odor (geosmin and 2-MIB) from drinking water.
<b>APPROX. VALUE</b>	\$800k
<b>COMPLETED</b>	March 2017

### **WAITAKARURU WATER TREATMENT PLANT UV**

<b>CLIENT</b>	Hauraki District Council (HDC)
<b>CONTRACTOR</b>	Service Engineers
<b>DESCRIPTION</b>	Installation of a UV plant to provide additional treatment compliance with the Drinking Water Standards for New Zealand (DWSNZ).
<b>APPROX. VALUE</b>	\$400k
<b>COMPLETED</b>	End of 2015

Based on our experiences with NZS 3916 and other design build contracts, including the projects listed above, we have collated discussions and feedback from Principals, Contractors and Consultants on their experiences with this contract standard. The sections below intended to provide a summary of the general thoughts, advantages, challenges, and potential improvements on the 3916.

## **5.1 GENERAL INDUSTRY PERSPECTIVE**

The overarching view on the use of 3916 was positive. In principle, all forms of contracts can produce good outcomes when all parties understand their roles and contractual obligations. The key to achieving such outcomes is contingent on the behavior and attitude of each party involved, as well as the relationship among parties.

NZS 3916 was drafted collaboratively and produced by a committee consisting of industry-wide perspectives. Hence when using this contract, performing major alterations to the original contract may call to question whether the contract is:

1. Appropriate for the purpose and intent of the project and if it will effectively meet the project objectives and requirements and;
2. Still apportioning risks fairly among all parties involved after the alterations.

The shift to design and build contracts has also meant a shift in tendering and procurement. At the end of the tendering stage, a large portion of the design is already complete. This generates an increase in risk for tenderers. Additionally, some tenders are evaluated with high price weighting. This can de-value the final project quality and demotivate tenderers from entering open-tender submissions. Therefore, both Principals and Consultants should take this into account when preparing the Tender documents.

## 5.2 PRINCIPAL, CONTRACTOR AND CONSULTANT'S PERSPECTIVES

This section provides the perspectives of the different contractual parties on NZS 3916. These have been grouped based on key themes related to this contract standard. It should be noted that this is only a sample of experiences hence may not be a complete representation of the water and wastewater industry.

*Table 3. Summary of Principal, Contractor and Consultant's Perspectives*

<b>Legend:</b>	
+ = Advantages	
- = Challenges	
o = Neutral comment	
<b>CONTRACTOR HAS SOLE DESIGN RESPONSIBILITY</b>	
Principal	<ul style="list-style-type: none"> <li>+ Increased transparency.</li> <li>+ More innovation, optimisation and therefore cost opportunity.</li> <li>+ Risk lies with one entity rather than two, simplifying legal matters.</li> <li>+ Contractor takes full liability of design, therefore less room for design variations.</li> <li>- Reduced input to design, as Principal loses direct access to the designer (can be advantageous if little client input is required).</li> <li>- Price premium due to design risk allocation to Contractor.</li> <li>- Higher tender preparation costs are hidden in the proposal's price.</li> <li>- Elongated tendering process due to upfront basis of design.</li> </ul>
Contractor and Sub-Contracted Consultant	<ul style="list-style-type: none"> <li>+ Contractor can contribute to design and cost opportunity.</li> <li>+ Greater Contractor involvement and output in project.</li> <li>+ More collaborative approach with the Engineer and/or Consultant.</li> <li>+ Contractor has improved ability to manage design risk.</li> <li>+ Contractor has high risk, high reward.</li> <li>- Increased project controls and awareness required due to higher risk.</li> <li>- Clients need to understand contractors tendering costs. Sometimes the cost of tendering may be prohibitive.</li> <li>- Design process is compressed into short tendering period, increasing risks to design.</li> <li>- High cost of tendering as a big portion of design is completed during the tender period.</li> </ul>
Consultant	<ul style="list-style-type: none"> <li>+ Contractor can contribute to design and innovation.</li> <li>+ More collaborative approach than advisory.</li> </ul>

- To Principal	<ul style="list-style-type: none"> <li>+ Clearer designation of risk and responsibility on the design.</li> <li>- Reduced input to design.</li> </ul>
<b>PRINCIPAL'S REQUIREMENTS</b>	
Principal	<ul style="list-style-type: none"> <li>+ Encourages optimisation and innovation.</li> <li>+ Objectives and requirements driven.</li> <li>+ Good specification ensures Contractor is held accountable to deliver high-quality outcomes.</li> <li>- Ambiguity in Principal's Requirements can lead to variations in scope.</li> <li>- Project output is very dependent on design specifications (the Principal gets what they ask and what they pay for).</li> </ul>
Contractor and Sub-Contracted Consultant	<ul style="list-style-type: none"> <li>+ Good specification that is not over-specified gives Contractor room to produce a better design.</li> <li>- Poor quality, consistency and clarity in Principal's Requirements leads to misinterpretation, re-work and unsatisfactory outcomes.</li> <li>- Overspecification reduces design freedom and possibility of innovation.</li> </ul>
Consultant - To Principal	<ul style="list-style-type: none"> <li>o Fine balance between detailed and over-specified Principal's Requirements.</li> <li>o Heavily reliant on the team preparing the tender in terms of experience and knowledge.</li> <li>o Principal's Requirements are often distributed throughout the tender and repeated in many sections, allowing room for ambiguity and contradiction.</li> </ul>
<b>STRUCTURE AND EXECUTION</b>	
Principal	<ul style="list-style-type: none"> <li>+ Industry familiarity as it is similar to 3910.</li> <li>+ Quicker delivery of projects.</li> <li>+ Single point of contact for contract management.</li> <li>+ Third party review can produce optimised output.</li> <li>o Finding right combination of Contractor and Consultant can be challenging.</li> </ul>
Contractor	<ul style="list-style-type: none"> <li>+ Industry familiarity as it is similar to 3910.</li> <li>+ Guidelines and schedules for off-site materials.</li> <li>- Big portion of design is done in tender phase, therefore expenses are front loaded.</li> </ul>
Consultant - To Principal - To Contractor	<ul style="list-style-type: none"> <li>+ Industry familiarity as it is similar to 3910.</li> <li>+ Clear design responsibilities and contractual roles.</li> <li>+ Two opportunities for Engineers to engage in a project; Principal's Consultant and Contractor's designer.</li> <li>- Bear the design cost during the tender phase (Contractor's designer).</li> </ul>

### 5.3 IMPROVEMENTS

The following items are points raised from participants in the industry which may warrant further investigation upon review of NZS 3916:

- Enforcement/guidance for writing consistent, clear and high-quality Principal's Requirements;

- Enforcement/guidance for reasonable level of detail required in the tendering phase;
- Guidance that modifications to the contract which include the term "Fit for Purpose" are ambiguous and open to interpretation and therefore should be avoided;
- Provision for risk (known and potential) sharing mechanisms between Principal and Contractor (e.g. NEC4 - Engineering and Construction Contract Option C);
- Clarity and guidance around payments for off-site materials and the implications on ownership of materials paid;
- Contractual option for including operation of the design and build works;
- Review how the contract addresses responsibility for all parties for safety in design as outlined in the new Health and Safety at Work Act.

## **6 CONCLUSIONS**

NZS 3916 was created to meet the needs of the New Zealand construction industry, which lacked a national design and build standard. The market reaction to this contract has been generally positive, and several water and wastewater treatment plants have been successfully delivered using this standard.

Since NZS 3916 is based on NZS 3910, a well-established contract standard, it is important to understand the differences between the two contracts in order to choose the optimal procurement method for each project. It is also important to be familiar with other options of design and build contracts available in the market.

Collaboration among parties and greater innovation opportunities are some of the key advantages recognised by the construction industry regarding the NZS 3916. However, a lack of clear and balanced Principal's Requirements is currently an area of concern for all parties. To address this issue, a recommended point of focus for the next NZS 3916 review is an increase in guidance around establishing high-quality Principal's Requirements.

The efficiency of standard reviews is limited by the quality of the feedback received from the industry. With this in mind, the purpose of this paper was to gain insight into the collective opinion of the industry and to identify potential areas of concern for NZS 3916. This provides the opportunity to raise awareness and contribute to the refinement of this standard in its early stages. Creating better national contract standards is essential for facilitating the delivery of high-quality projects in the water and wastewater sector.

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