

NZTA Z01-C: 2025

Independent Construction Monitoring and Quality Assurance Services Specification

June 2025

1. Scope

- a. This specification sets out the requirements for construction monitoring and quality assurance by the Contract Administrator (CA) to satisfy the Principal's requirements for construction Contracts.
- b. Independent construction monitoring and quality assurance services apply to physical works contracts.

2. Referenced Documents

The following documents are referenced in this Specification.

Reference	Title
AS/NZS ISO 9001	Quality Management Systems – Requirements
NZTA Z08	Standard for Inspection, Sampling and Testing
NZTA Z44	Risk Management Standard
NZTA Z12	Performance Evaluation

3. Definitions

In addition to the definitions set out in AS/NZS ISO 9001 (unless amended by this Specification), the definitions listed below apply to this Specification:

Term	Definition
Certification	Certification is the formal confirmation that certain characteristics of materials, mix designs, supplies incorporated in the construction work conforms with the approved plans, designs and specifications, and exceptions or departures. This confirmation is often, but not always, provided by an external / independent review, inspection, assessment, or audit by a person qualified, designated or delegated to certify.
Compliance	The action of doing what is necessary to meet a specified (typically regulatory) requirement, obligation, or policy.
Conformance	Fulfilment of requirement (typically related to a management plan, process, or specification).
Contractor's Quality Manager	A Quality Manager appointed to act independently of day-to-day delivery activities and to ensure that the requirements of the QMP are implemented and maintained.
Quality Advisor	<p>The Quality Advisor that is appointed and approved by the Principal to assist the Contract Administrator. The Quality Advisor is dedicated to construction monitoring and quality assurance so as to ensure conformance to Standards and Specifications.</p> <p><i>Note: This person does not replace the Contractor's Quality Manager, Project Engineer or team and therefore does not relieve the Contractor from their accountability towards quality management, assurance and control of the works it has been contracted to carry out.</i></p>
Hold Point	A checkpoint in the construction process beyond which work cannot proceed until conforming with specified requirements has been verified and the hold point has been released by a person with the necessary authority.

	Usually applies to verification of critical aspects that cannot be inspected or easily corrected at a later stage in the process (e.g. because they will no longer be accessible).
Inspection and Test Plan(s) (ITP)	The Contractor's detailed plans for inspection and testing of the Physical Contract Works aimed at verifying and confirming with evidence to the Principal that the Contract has been delivered and are compliant with the contractually specified requirements.
Non-compliance	Deviating from doing what is necessary to meet a specified (typically regulatory) requirement, obligation, or policy.
Non-conformance reports (NCR)	A document (report) that identify and record discrepancies between the actual condition of a product or service and specified requirements, or the deviation from a process or procedure. NCR's include the cause, impact and agreed remedial action. NCR's are raised not only when specified requirements were not met for completed works, but also during construction where a process failed to achieve the specified outcome.
Quality File	A repository of indexed quality records in a format that allows access to interested parties and retained after project completion for a defined period.
Random verification testing (RVT)	Random verification tests are carried out by an independent party in addition to what is required by the ITP. RVT is risk-based and carried out to confirm inspection and test results or where areas of concern are identified.

4. General

The CA shall with regards to construction monitoring and quality assurance of the Contractor's construction works be:

- a. Commercially independent and without undue pressure to accept or sign-off any works, witness- or hold points.
- b. Suitably qualified with relevant experience in the contract specific works.
- c. Responsible for conducting on-site surveillance to the contractually agreed construction monitoring (CM) level.
- d. Responsible to certify compliance of construction works to design and specification.
- e. Responsible to ensure construction compliance to contractual requirements is substantiated by sufficient evidence.

The Principal may appoint Advisors, including Quality Advisors, to support the CA in fulfilling their duties.

The CA shall work collaboratively with the Principal to provide assurance that contract works meet specified requirements.

5. Construction Monitoring and Quality Assurance

5.1 Quality Management Plan

- a. The CA shall prepare and implement a contract-specific Contract Administration Quality Management Plan (CAQMP):
 - in collaboration with the Designer and construction Contractor.
 - defining the method's objective and systematically follow a targeted, and risk-based approach.

- identifying and agree with the Designer what information is required from parties to the physical works Contract for the certification of works.
 - independent of the Contractor's QMP and shall be clear on reporting lines, roles, responsibilities and authorities for construction monitoring and quality assurance and control services, including investigation and testing.
- b. The CA shall submit the CAQMP to the Principal for acceptance prior to the commencement of works.
- c. The CA shall periodically review and update the CAQMP to reflect the risk profile. Reviews shall be clearly documented and updates to the CAQMP shall be submitted to the Principal.

The CAQMP shall as a minimum address the quality management activities and requirements set out below:

5.1.1 Management Plan Reviews

- a. Review of the Project Management Plans prior to works commencement, and updates thereto, to ensure these all comply with the relevant Waka Kotahi minimum standards and any other project specific requirements.
- b. Review the contract inspection, sampling and test schedule for compliance with Z08.

5.1.2 Principal Supplied Documentation Reviews

- a. Review of the Principal supplied documentation (drawings and specifications) for an understanding of the quality requirements, including identification of assets and asset components and sub-components within the project's work breakdown structure.
- b. Review whether land requirements and consents (Resource and Building) are in place prior to commencement of construction.
- c. Review of any Contract changes to tender.

5.1.3 Facilitation of Design Interpretation

- a. Design advice to assure Contractor's correct interpretation and understanding of the design and intent.
- b. Resolving of quality issues between Designer and Contractor.
- c. Facilitate Requests for Information (RFI) between the Contractor and the Designer where ambiguity or additional information is required. Supplier instructions, where required, shall be issued by the Contract Administrator.

5.1.4 Design Change Management

- a. Manage design and specification changes and Principal's approval of departures.
- b. Design change control and issue for construction.

5.1.5 Quality Risk Management

Quality risks are managed in accordance with *Z44: NZTA Standard for Risk Management* to:

- a. Ensure that design related quality risks are transferred into the contract Risk Register.
- b. Develop a risk action plan for all quality risks that have been evaluated as being High or Critical.
- c. Confirmation that quality risks are treated by the Contractor through construction planning or other mechanisms appropriate to the risk.
- d. Review the Contract operations to identify emerging risks that require treatment and the success of previously implemented treatments.

5.1.6 Construction Plans Review

- a. Review of the Contractors' construction processes and/or work method statements to confirm techniques are appropriate such that they do not reduce the effectiveness of the design in terms of quality.
- b. Review conformance with the agreed drawings and specifications.
- c. Review temporary works design and shop drawings to ensure that suitably qualified persons have reviewed and verified the temporary works design.
- d. Review and agree Contractor's ITP's (and subsequent revisions) to ensure relevant quality controls are in place to confirm conformance with the Contract (including temporary works) and other requirements specified by the Principal or Designer, including hold/witness points.

5.1.7 Quality Assurance Evaluation

- a. Provide assurance that management plans, work procedures, construction material, construction components, and quality assurance documentation comply with specified requirements.
- b. Carry out audits to gain confidence that correct QMS processes are being followed during construction.
- c. Review quality records maintained by the Contractor for completeness and compliance to allow the producer statements or certificates (e.g. PS4) to be signed.

5.1.8 Construction Monitoring for Quality Control

The procedures used to establish design and construction review activities, priorities and frequency shall consider the likelihood of defects, based on the measured performance of the supplier's QA system, and the consequences of defects considering the nature of the asset components being constructed.

Apply the CAQMP to provide confidence that completed works comply with drawings, specifications and supplier instructions as issued, subject to amendments approved thereto. This will include the following activities and responsibilities:

- a. Monitor and validate construction compliance through general conformance testing, reviews, observation of site testing and inspections at a frequency detailed in the specifications and CAQMP, and attend Hold/Witness Points at an agreed notice.
- b. Ensuring all site visits are well documented and shared with the Contractor and Principal.
- c. Providing as part of every inspection (where necessary) written instructions to the Contractor indicating what action needs to be taken, including corrective actions and re-inspections where required, and provide a copy to the Principal.
- d. Ensuring that the Principal is informed of ongoing inspections to participate in, if required.

5.1.9 Quality File Reviews

- a. Review and analyse the Contractor's Quality File to provide current, explicit information about the works to support open, informed, collaborative and timely decision making, leading to consistent conformance of physical works outcomes.
- b. Data trend analysis shall be used to support proactive risk identification and mitigation to demonstrate that the design, specifications and Principal's requirements are being met, or that agreed changes are justified and are in turn being achieved.
- c. Review all records and test data generated by the Contractor and independent laboratories to provide oversight of quality processes and systems, to assist with interpretation of the results, and provide engineering advice.

- d. Verify that comprehensive documented evidence exists to confirm design intent has been met and allowing the issuing of a Producer Statement for Construction Review (PS4) or as appropriate to the project.

5.1.10 Non-conformance Oversight and Advice

- a. Where inspection or review of QA records reveals non-conformance with the CAQMP or the Contractor's QMP, advise the Principal on whether there is a need for additional visits, sampling and testing required to further check the works.
- b. Evaluate effective functioning of the Contractor's defect management processes:
 - Agree in the Contractor's QMP the process for handling and definition of a non-conformance.
 - Review the Contractor's process for handling non-conforming works as defined in their QMP.
 - Advise the construction team when a non-conformance report is required (if not picked up by Contractor).
 - Work with the Contractor to analyse and approve remedial works and final deliverables.
- c. Report, or review Contractor's report to the Principal on findings, non-conformances, remedial actions completed and outstanding quality issues of the Contractor's QMP and delivery outcomes.

5.1.11 Random Verification Testing (RVT)

- a. As part of the CAQMP a schedule for RVT, based on the tendered schedule shall be prepared and reviewed upon release of the construction programme. The testing shall be designed and programmed specifically:
 - for the type of work being undertaken,
 - history/experience/previous performance of the Contractor involved,
 - the risk associated with specific construction components,
 - and to optimise the application of Principal's funding in this work.
- b. The proposed RVT plan shall be discussed with the Principal and on acceptance, notify the Contractor before implementing it in accordance with the above requirements.
- c. Implementing the Random Verification Testing (RVT) Schedule.
- d. RVT relates to the testing of materials, not of general conformance testing such as checking tolerances with string lines, compaction with nuclear densometer, etc. RVT can be increased or reduced with Principal's approval based on the quality results.
- e. Carry out RVT sample taking for laboratory tests, and sampling and testing during normal visits to the work site.
- f. All laboratory and specialist testing, where appropriate, shall be carried out by an IANZ registered laboratory, but different from the IANZ registered laboratory engaged by the Contractor.

5.1.12 Reporting on Quality Performance

- a. Summarise the results of quality assurance and control activities and report to the Principal on an agreed frequency.
- b. Conduct regular Contractor performance evaluations in accordance with *NZTA Z12: Standard for Performance Evaluation*.

5.1.13 Certification of Physical Works

- a. Review reported evidence and certify conformance of physical works to design, specifications and Principal requirements.

5.1.14 Facilitation of Handover and Close-out

- a. At the outset of construction, confirm with the Principal and Contractor what information and documentation are required for handover and closeout of construction activities.
- b. Review project records for completeness and conformance as requirement of the Contractor's closeout and handover procedure, including the progressive closure of works portions.
- c. Oversee the delivery of the asset owner's manual (AOM) with support from the Design Consultants and Contractors.
- d. Arrange detailed inspections for portions of the project or the entire project with the Principal and Contractor to compile a minor omissions and minor defects (snag) list prior to the issue of the Practical Completion Certificate.
- e. Arrange a final inspection prior to expiry of the Defects Notification Period for issuing the Project Final Completion Certificate. Particular attention shall be paid to:
 - The sealed surface,
 - Surface shape and surface drainage,
 - Drainage and sediment runoff control facilities,
 - Standard of pavement marking,
 - Condition, location and reflectivity of highway furniture,
 - Road safety barrier installations, including transitions and connections with bridge side protection,
 - Shear bases and other frangible devices.

5.1.15 Reporting and Debrief

- a. Summarise and report to the Principal and Independent Certifier on the effectiveness and efficiency of the Project quality management, assurance and control, and highlight any quality risks to project conformance and future maintenance and operation of the involved assets.
- b. At completion of works, organise a lessons learnt debrief to the Principal for the benefit of future projects.