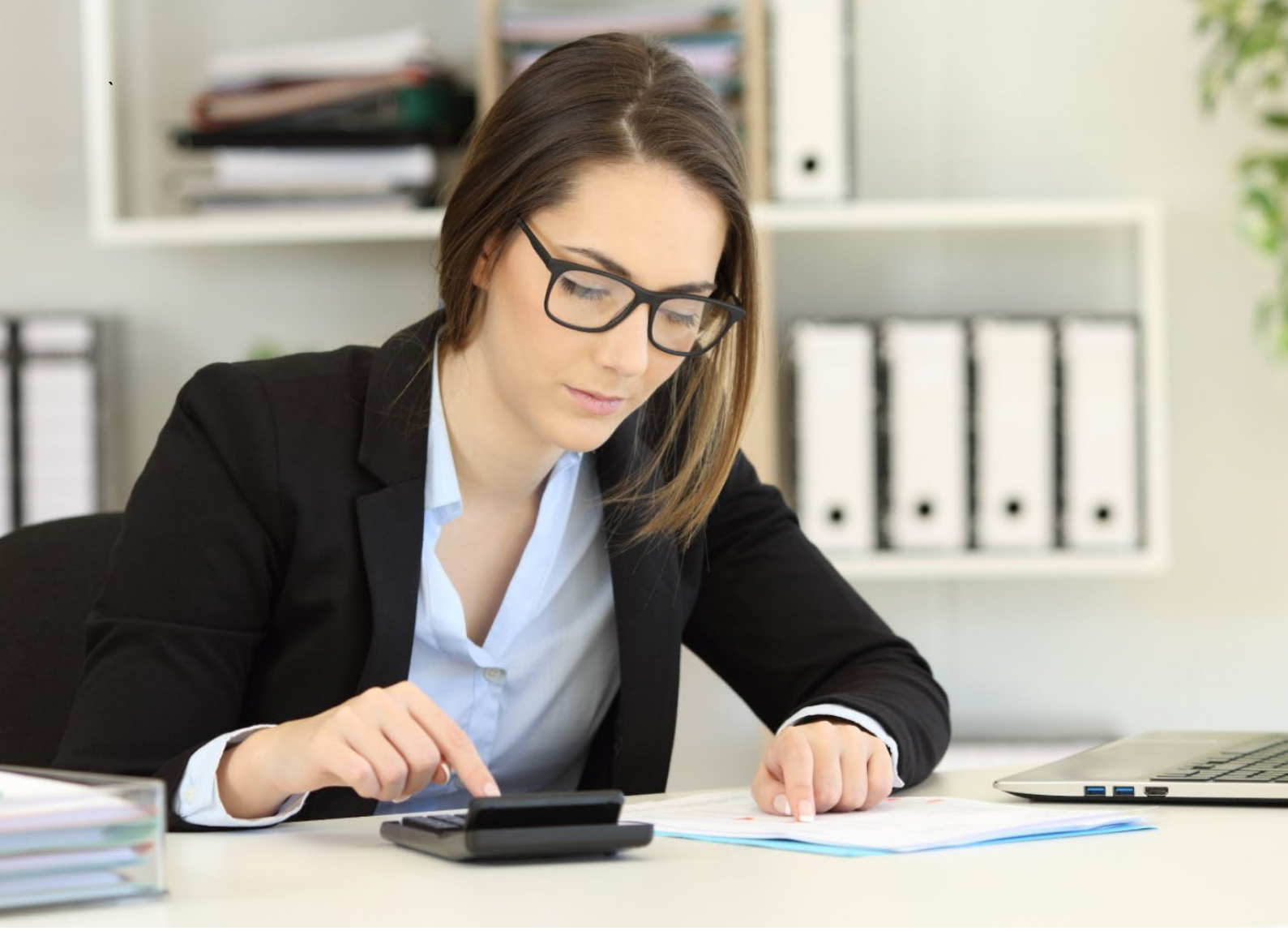

Standard for Supplier Quality Audits

NZTA Q6:2021

May 2022

Revision 1

WAKA KOTAHI
NZ TRANSPORT AGENCY

New Zealand Government

More information

NZ Transport Agency
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If you have further queries, call our contact centre on 0800 699 000 or write to us:

NZ Transport Agency
Private Bag 6995
Wellington 6141

This document is available on Waka Kotahi NZ Transport Agency's website at www.nzta.govt.nz

Note on Standard status

This Standard will be updated periodically to incorporate changes within the Waka Kotahi NZ Transport Agency standards and the website should be checked to confirm the most recent edition of the Standard.

RECORD OF AMENDMENTS			
Amendment Number	**Subject**	**Effective Date**	**Compiled by**
Version 1.0	Issued	February 2022	Johan Rivas Rob Damhuis

Table of Contents

FOREWORD

This Standard is prepared by Programme and Standards, Transport Services, Waka Kotahi NZ Transport Agency in line with the requirements of ISO 9001.

The standard sets out requirements for suppliers undertaking quality audits during the delivery of contracted works with the main objectives to:

- Establish confidence through evidence that quality standards are met, especially those defined in contract Quality Management Plans;
- Establish confidence through evidence that technical decisions made on site are in line with contract requirements;
- Promote consistency in quality auditing processes across suppliers and projects or contract works;
- Engender consistency in reporting quality performance in support of contract performance measurement outcomes, and the pre-qualification process for tendering;
- Allow the identification of quality focus areas for improvement across transport infrastructure delivery, and;
- Enable industry wide continual improvement.

Readers of this specification must read and be aware of the Contract Manuals for Professional Services, Construction and Maintenance Contracts, as well as Z01 - the standard for in the quality management within Waka Kotahi as given in https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/quality-assurance/quality-assurance-documents/.

1. PURPOSE

The purpose of this Standard is:

a) To enable the contracted supplier to measure the integration of statutory, technical and performance framework requirements of the various forms of NZ Transport Agency contract as defined in their Quality Management Systems (QMS).

b) Together with the QMP, provide a basis for evaluating the effectiveness and efficiency of the Supplier's Quality Management System (QMS).

c) To confirm and document that the supplier is meeting standards, especially the requirements defined in contract Quality Management Plans (QMP).

d) To promote consistency in the measurement of quality practices across suppliers and projects in support of consistent contract performance measurement outcomes.

e) To allow the identification of quality focus areas for improvement across transport infrastructure delivery.

f) To enable the preparation and management of audit plans in a consistent manner, thereby ensuring the established standard of quality is achieved.

1.1 Quality Management

The Supplier must have a project specific QMP that covers quality assurance and control requirements as defined in *Waka Kotahi NZ Transport Agency - Z01 Standard for Quality Management Plans*. As part of their QMP, the supplier shall implement and maintain a quality audit plan and supporting systems for the duration of the contracted work.

The Supplier shall ensure the integrity of their self-compliance monitoring and auditing activities in accordance with this standard. The supplier's audit system will be reviewed independently on a regular basis by the Principal or their representative for national consistency.

1.2 Collaboration

The Principal, Consultant, and Contractor need to work as a team to produce, as a minimum, the required quality in design and construction that will deliver infrastructure capable of performing its intended function throughout its expected economic life span.

Although the contract type and individual accountabilities differ, collaboration between Consultants and Contractors is encouraged to establish an integrated audit approach that will provide a true reflection of the quality status, providing confidence through results and predictable outcomes.

Collaboration between branches and divisions within organisations is also encouraged to ensure maximum benefit is achieved, with quality auditing highlighting examples of good practice, rather than simply identifying non-conformance, process shortcomings, and corrective actions. This will allow other project teams, branches, and divisions to share information and adjust their working practices, delivering continuous improvement as a result.

2. RELATED DOCUMENTS

Documents related to this Standard include but are not limited to:

a) Professional Services contract, referenced from the State highway professional services contract proforma manual (SM030);

b) Physical Works contract or a Maintenance Works contract is referenced from the State Highway Construction Contract Proforma Manual (SM031), and the State Highway Maintenance Contract Proforma Manual (SM032);

c) NZTA Standard Z01, for all Quality Management Plans.

d) NZTA Standard Z08, for Inspection, Sampling and Testing.

e) NZTA Standard Z11, for Performance Evaluation.

f) AS/NZS ISO 9001:2016 Quality Management Systems – Requirements.

g) AS/NZS ISO 19011:2019 Guidelines for auditing management systems

h) Audit sheet templates

i) Waka Kotahi Specifications and Notes (refer to https://www.nzta.govt.nz/resources/nzta-register-network-standards-guidelines/); and

j) Waka Kotahi quality management requirements as given in https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/quality-assurance/quality-assurance-documents/.

NOTE: Suppliers shall comply with the publication of the referenced Minimum Requirements, Standards or Specifications current at the time of contract award.

3. DEFINITIONS

The following definitions apply to this Standard:

- **Auditor**

A person who by reason of relevant professional qualifications, practical experience or expertise is able to carry out audits, or make decisions as required in terms of this document and the project contract document.

They shall be independent of the works and delegated in writing by the Principal or his Agent, or in terms of the project contract document to carry out such inspections or decisions.

- **Certified Supplier**

A Certified Supplier means an organization or company certified to ISO 9001 by a Certification Body (CB or Registrar) who audits the performance of the organization or company against the latest version of the ISO 9001 Requirements. Once certified, the Registrar issues an ISO 9001 Certificate demonstrating that the organization or company is Registered to ISO 9001 for a three-year period.

- **Consultant**

The definition can mean designer, Independent Reviewer, Principal's Advisor / Site Representative or Engineer's Representatives, depending on the Contract Type.

- **Construction plan**

A Construction Plan includes the information necessary for site staff to carry out the work compliant with design and specification, and typically consists of a risk assessment of the involved works, a resource plan, methodology statement, inspection and test plan (ITP), and any other detailed and work specific plans such as lift plans, temporary traffic management plans, etc. It should also include relevant permits where applicable, such as excavation permits.

- **Contractor**

The Person/Company whose tender has been accepted by the Principal or the Person who has been so named in the Contract, and includes the executors, administrators, and successors of the Contractor. Interchangeable with "Supplier".

- **Corrective Action**

A Corrective Action is an action realizing and defining a problem, containing and mitigating the problem, determining its cause and taking appropriate action to prevent it happening again. A corrective action is considered a reactive response to a problem since it is taken when a non-conformance is detected. Corrective Actions are measurable, achievable solutions with realistic deadlines that focus on the root cause.

- **Design**

The Design is the realisation of a concept, idea or theory into a drawing, plan, specification or model that allows a series of objectives to be achieved. Design is the process of creating a solution to a project brief and then preparing instructions allowing that solution to be constructed. Designs may include drawings, design details, specifications, bills of quantity and design calculations.

- **Designer**

The Designer means the Person responsible for the Design, who has delegated responsibility for undertake the Design in accordance with the Principal's Requirements, preparing Designer certification submission packages, and signing the Producer Statements for both Design and Construction Review.

Designers can be architects, consulting engineers, quantity surveyors, or principal contractors, specialist contractors, tradespeople or commercial clients i.e. anyone who specifies and alters designs as part of their work.

- **Independent Reviewer**

A delegated person, who holds a relevant professional qualification, practical experience or expertise which qualifies them to examine or review whether a specific project component is compliant with design, specifications and other requirements, or whether action is required to remediate or prevent failure, or carry out technical reviews that drill down into a specific part of a project.

The Independent Reviewer shall not be an employee of the Contractor, his subsidiaries or the contractor's sub-contracted laboratories.

- **ISO 9001 audit**

An ISO 9001 audit is a systematic, independent, objective and documented process for gathering facts.

- **ISO 17025**

ISO 17025 is a quality management standard and the main standard for testing and calibration laboratories to which IANZ testing laboratories are accredited. ISO 17025 shares many commonalities with ISO 9001, but ISO 17025 evaluates the technical competence in lab testing and calibration services, and it applies to organizations that produce testing and calibration results.

- **May**

Term used to indicate something that is optional and may be considered for use. "May". verb. a choice to act or not, or a promise of a possibility, as distinguished from "must" or "shall," which makes it imperative.

- **Must**

Term used to indicate something that is mandatory or required by law and is equivalent to "shall". Also, "must not" indicates something is prohibited.

- **Non-conformance reports (NCR)**

A report, identified by the Supplier as part of their QA, or instructed by the Principal, Consultant or Independent Reviewer, and issued by the Supplier, that addresses specification deviation or work that fails to meet agreed key performance indicators, quality standards or performance expectations.

- **Preventive Action**

A Preventative Action is one that proactively identifies and eliminates the cause of a potential nonconformity or other potential undesirable situation.

- **Principal**

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

- **Performance Assessment Evaluation**

In accordance with Standard Z/11:2015, the contract performance measurement system shall be used for the evaluation of performance and provision of information about the behaviours that the Principal is encouraging under the specific performance requirements. The Principal expects to gain insight as to where focus should be for the successful delivery of the project and recording performance at contract completion as input to the tendering process for future contracts.

- **Quality Assurance (QA)**

The maintenance of a desired level of quality in a service or product, especially by means of attention to every stage of the process of delivery or production. QA concentrates on providing confidence that contract quality requirements will be fulfilled and is a commitment to quality by the Supplier.

Quality Assurance is generally embedded into contracts as part of the Supplier's general obligations as in Clause 5 of NZS 3910:2013 and in NZS 3916: 2013, or as part of the Principal's Quality Assurance requirements as in NZTA Standard Z01.

- **Quality Audit**

A quality audit is an ad hoc or regular, systematic review of activities to identify whether these activities are performed in line with good practice, processes and procedures. The goal of carrying out audits is to reveal any missing or inefficient policies, procedures and/or processes that reduce quality levels and increase the probability of project failure.

- **Quality File (QF)**

The Supplier's secure document and record control storage and retrieval system holding all information emanating from reviews, verifications, inspections and testing, and all communications, reports and files related to the quality of the works, in agreed digital format.

All the information held in the Contract specific QF will remain with the Principal for permanent record.

- **Quality Management Plan (QMP)**

A document, or several documents, prepared by the Consultant and/or the Contractor, that specifies quality standards, practices, resources, specifications, and the sequence of activities relevant to a particular product, service, project, or contract. The plan looks at specific areas of a project that could affect quality and outlines the ways to mitigate that risk.

The Quality Management Plan assumes the role of an actionable plan and may be represented by more than one type of document to produce the required quality outcome.

- **Shall**

Term used to indicate something that is mandatory or required by law. Similar to "must".

- **Should**

Term used to indicate a recommendation based on industry best practice. The word "should" does not express a legal requirement.

- **Supplier**

A legal entity that is either a sole proprietorship, partnership, limited liability company or trading trust, engaged to provide the services set out in the contract documents. Interchangeable with "Contractor".

- **Supplier's Quality Assurance Manager**

The Supplier's Quality Assurance Manager mean the Quality Manager appointed to act independently of day-to-day construction activities and to ensure that the requirements of the Quality Plans are implemented and maintained.

On smaller projects or maintenance works, a dedicated Quality Assurance Manager may not be appointed. In this case the supplier shall appoint a suitably qualified member of the construction team with the responsibility to oversee quality assurance and control in an impartial manner.

- **Standard**

In this Standard the word "Standard" shall be interpreted as a reference document referred in the contract, whether a Waka Kotahi approved regional or national document, or international document published by a recognised Standards organisation. Standards must be identified by their Standards organisation and number.

They are generally used to provide a means of compliance with this Standard.

- **Verification**

The formal, unbiased act or process of confirming, checking or establishing the truth, accuracy, compliance or validity of a piece of work, material or asset against agreed key performance indicators, quality standards or performance expectations, either through research, examination, inspection or testing.

Verification includes design and construction assumptions, calculations, estimates, drawings, reports, and quantities and other records (compliant and non-compliant) required to carry out the act or process of verification against the agreed key performance indicators, design, quality standards or performance expectations, including identification of non-compliance by testing, or through other non-conforming results.

- **Waka Kotahi**

Waka Kotahi in this Contract means the New Zealand Transport Agency established as defined by Section 93 of the Land Transport Management Act 2003 with functions as set out in Section 95 of that Act.

- **Will**

Term used to indicate something that is mandatory or required by law. Similar to “must” and “shall”.

- **Work Breakdown Structure / Work Components**

The outline of the Contract Works developed in accordance with the template included in Appendix A of Waka Kotahi NZ Transport Agency Z01 – Standard for Quality Management Plans.

4. RESPONSIBILITIES

4.1 Supplier Responsibilities

The Supplier is responsible for the quality of works and the Quality Management System that support the achievement of this outcome.

The Supplier shall appoint a Quality Manager with the following delegations and responsibilities with regards to auditing:

- Developing a quality audit system that will adequately measure the level of quality management, assurance and control on the Project or Contract, in accordance with the reference documents;
- Develop a project audit schedule;
- Ensuring the audit system is effectively implemented;
- Report audit results and oversee that due corrective actions are taken;
- Analyse audit results for improvement and reporting into the contract performance measurement system;
- Follow up audit actions to closure.

Note: For smaller projects or contracted works where a dedicated Quality Manager is not appointed, a suitably qualified person but impartial to the works is to be appointed to resume the responsibilities of a Quality Manager as defined above.

4.2 Auditor's Responsibilities

The Auditor is responsible to carry out the assigned audits as per Audit Plan and Schedule and shall:

- Be professional, fair, unbiased and non-judgmental at all times;
- Follow safety procedures, and all other required procedures;
- Explain the purpose of the audit to the auditees;
- Undertake evidence-based observations and reporting;
- Provide a timely report to the auditee and Quality Manager; and
- Seek specialist advise when assessing an area that they don't have the requisite knowledge and experience in.

5. AUDITOR'S REQUIREMENTS

Whether the Auditor is the supplier's internal auditor, or an auditor external to the organisation, the Auditor must be:

- Trained and competent in auditing principles, with at least 2 years of experience in auditing;
- Have experience in, and understand the work being audited (i.e. have at least 10 years of experience in the field);
- Approved by the Principal; and
- Independent of the contract or project team carrying out the work, i.e. must not have a conflict of interest or under undue pressures.

6. AUDITING

6.1 System Audits

The supplier is responsible to plan and see system audits carried out by independent and suitably qualified auditors, with the purpose being to systematically verify the Contract or Project's management systems against relevant Standards, including international standards such as ISO 9001 and ISO 17025.

Audits shall verify the Contract or Project team's degree of compliance with their implemented systems, including Quality Management Plans developed to the standard defined in Z01.

System Audits may include those carried out by the supplier's certification body, and should be carried out on a regular basis, but at least annually.

Appendix A provides a standard format for Audit Questionnaires, and examples of various audit questions that can be used.

6.2 Work Component Audits

Work Component Audits concentrate on the Work Breakdown Structure (WBS) elements of the Project. For rehabilitation or renewal works under network maintenance contracts, work component audits will apply to Renewal/Rehabilitation Quality Plans (RQP).

Audits are conducted by the Supplier to confirm compliance with their QMP/ RQP, Design or Construction Plans, procedures and inspection and test plans (ITP), and include:

6.2.1 Audit Schedule

The Supplier shall compile an Audit Schedule that will cover all project or contract work components, and the frequency thereof.

The Supplier shall submit the Audit Schedule to the Principal for review and approval.

6.2.2 Auditing Project Stages

Work Component Audits shall be carried out at three stages:

- At the start of works to confirm work component planning and pre-commencement conditions have been met;
- At intervals during project or contract component works to confirm that design or construction plans are followed. Intervals should not exceed 2 monthly.
- At the end of work for each identified project or contract works component to verify completeness and compliance of works and supporting evidence, i.e. quality records.

6.2.3 Focus Areas of the Audit

Audit check sheets must be developed and shall reflect the contract or project works type and critical activities, and shall address the following key quality assurance and control elements as a minimum:

6.2.4 Design or Construction planning

- Timeliness of planning documents;
- Status and completeness of plans, including the set of "Issued for Construction (IFC)" documents for the specific work;
- Availability of construction documents on site;
- Risk identification, management and mitigation;
- Clarity of instructions in the design / construction documentation, e.g. drawings, procedures, estimates, risk definition, etc.

6.2.5 Design and Construction quality assurance and control

- Supervisory staff competencies and knowledge of the works being undertaken;
- Communication to designers / site staff – briefing on activities and quality requirements;
- Information control;
- Reviews and verifications at appropriate design stages;
- Inspection and testing of physical works, and the review of results;
- Control of hold points for each Critical Activity;
- Change control.

6.2.6 Construction management

- Quality and appropriateness of the plant and equipment;
- Operator skills;
- Methods of working;
- Material management, including compliance, quantities, stabiliser application rates, bituminous spray rates and quantities, etc;
- Project management processes and procedures, including programming vs actual progress, construction record keeping, dimensional controls to drawings, etc.
- Contract conformance management, e.g. deflection and riding quality.

6.2.7 Defect management

- Identification of non-conforming work;
- Reporting of non-conforming work;
- Remediation approvals and management.

6.2.8 Quality records

- Completeness of records, including handover documentation against stated requirements;
- Inspection and testing records, and decision making;
- Design reports;
- As-built information, compliance and completeness;
- Progressive close-out of works as per work breakdown structure.

Appendix A provides a standard format for QMP Audit Questionnaire(s), while **Appendix B** shows examples of work component audit questions.

6.3 Independent Reviewer (IR) Audits

As part of the Independent Reviewer's responsibilities for monitoring construction against designs and technical specifications (also referred to as product audits), the IR will also carry out regular reviews of the Supplier's quality system, including the audit system (also referred to as process audits). The frequency of these process audits will be risk based, and determined by factors such as changes in work component works and teams, types of asset components being constructed, etc.

Independent Reviews are delegated to:

- Collect project information and data, either from the contract parties or directly from the testing facilities;
- Analyse this data and information, and provide a contextual comparison with good practice and specifications;
- Recommend improvements or Non-conformances, where applicable.
- Document findings and recommendations in a report to the Principal or his agent.

6.4 Principal's Independent Audits

The Principal reserves the right to engage an independent party or representative to conduct reviews or audits on its behalf, at any time and shall brief the suppliers as to the scope of the audit. The Supplier will support the Principal's audits and make such personnel, site, and documentation available to meet the requirements of the scope of the audit.

7. AUDIT REPORTING

7.1 Audit Report Format

An Audit Report must be prepared summarising the Audit findings – see **Appendix C** for a typical audit report template. The Audit Report format shall:

a) be in writing;

b) be clearly and formally documented, factual and without opinion. Graphs should be used where appropriate to visually illustrate results.

c) Refer to the notes, including the summary of significant findings;

d) provide adequate disclosures to enable the intended users to understand the effect of material deficiencies and events on the information conveyed in the audit;

e) for project component audits, be such that it expresses the evaluation of each audit focus area as a percentage compliance, with a final combined audit score for the work component.

7.2 Actions Coming from Audits

The Supplier shall have a system to see that elements requiring corrective actions are managed effectively, and that they are closed out timely and appropriately.

The corrective actions shall include reasonable deadlines for the completion depending on the severity of the non-conformity and shall be clear and trackable.

7.3 Reporting Audit Results

The Supplier shall record audit results and submit a summary report for discussion at Quality Meetings. The audit results will serve as input to the Principal's contract performance measurement system as indication of specified standards being met in accordance with Waka Kotahi NZ Transport Agency Z/11 – Performance Evaluation.

7.4 Review and Analyse Audit Results

The Supplier shall analyse audit results on a regular basis to acknowledge good performance by teams or identify trends requiring attention.

The analysis shall include:

a) **Design Compliance**: Approval of design amendments by the Principal, completeness of design documentation and availability to the Contractor (on site) at all times, assessment of Hold Point with records, etc.

b) **Material Compliance**: Appropriate approvals given, testing undertaken to the requirements contained in the specifications, and decisions on any non-compliant test results.

c) **Construction Compliance**: Construction to standard and design specifications met, and acceptance of deviations from these requirements by the Principal.

d) **Quality assurance**: compliance with requirements of QMP, RMP and/or QMS.

e) **Cause and Consequences:** Understand the cause and consequence of noncompliance to ensure appropriate preventive actions for continual improvement.

Audit results shall be reviewed and analysed regularly by the Supplier's national Quality Manager for continuous improvement purposes.

7.5 Contract Performance Measurement Input Ratification

The Auditor shall verify and confirm that the processes producing the results for input into the contract performance measurement system are accurate and reliable, including:

a) **Meeting specified quality requirements** – quality management, assurance and control processes and records align with the QMP requirements and work component quality plan, including the ITP, with audit reports as confirmation. Site condition is considered for conduciveness to quality work.

b) **Defect management system** – whether the identification, reporting and management of defects, non-conforming works or processes are rigorously carried out, and are timely closed out with appropriate actions.

c) **QC Documentation** – the completeness and compliance of quality records during construction as required by the project progressive close-out process.

7.6 Contract Performance Measurement Scores

The Audit format shall include a conclusion that expresses the evaluation of each work component to a scale suitable for use in the contract performance measurement scoring system.

7.7 Disagreements and Disputes

Where agreement on audit results cannot be reached between the auditor and the auditee, the procedures to deal with disputes and disagreements within the Contract shall be followed to remedy disagreements or disputes.

8. RECORDS

All Audit Reports must be:

- kept in the Project or Contract Quality File;
- have confirmation that all Corrective Actions have been closed out and signed off by the Quality Manager and reviewed by the Supplier's national and regional Quality Managers;
- submitted to the Principal as part of the Contract quality records; and
- summarised as a table in the Construction Completion Report.

Appendix A – Typical QMP Audit Questions (Contractors)

PROJECT PARTICULARS			
Business Unit:		Date:	
Auditor(s):		Auditee(s):	
Project Number:			
Project Name:			
Documents Audited:			

Part 1: Quality Management Plan Audit Checklist

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
Contractor's Quality Management Plan										
1	Has the Quality Management Plan been approved by the Principal prior to any physical works starting? (QMP addresses requirements of NZTA Standard Z01:2021)									
Lead and Direct Quality										
2	Does the QMP define the Contractor's overarching quality policy and objectives and how these align to the Principal's quality objectives for the Contract?									
3	Has the quality risks and opportunities that can affect conformity of the Contract Works been identified, including any notified by the Consultant or Designer?									
4	Was a Contractor Management Review undertaken within 6 months of Contract Award to confirm suitability of QMP?									
5	Has annual Contract Management Reviews of all information and results from quality assurance and control activities,									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
	including external reviews, contract reviews, management system audits and performance against Quality Objectives been undertaken?									
6	Were the results of the Management Review presented to the Principal and Consultant at the Quality Meeting?									
Quality Management Systems										
7	Does the systems, procedures, plans, methods and equipment as detailed mitigate identified quality risks?									
8	Is the Quality Management Plan as approved implemented, including all the systems, procedures, plans, methods and equipment as stated?									
9	Has the Supplier determined the internal and external communications relevant to its Quality Management System and projects within the QMS and QMP?									
10	Are the template quality documents required by the Supplier's Quality Management System controlled?									
11	When creating and updating documented information, does the Supplier ensure appropriate: • identification and description? (e.g., title, issue date, etc.); and • review and approval prior to issue and/or re-issue?									
People										
12	Are roles, responsibilities and authorities for relevant roles that have an impact on quality of work outcomes, assigned, documented, communicated and understood by staff?									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
13	How has senior management ensured that the responsibilities and authorities for relevant roles are assigned, documented, communicated and understood within the contractor's organisation for each project?									
14	Is training provided in systems, procedures, plans, methods, standards, guidelines and equipment that can impact delivery of the contract works?									
15	Has the contractor's organisation determined and provided the persons necessary for the effective implementation of its Quality Management System and for the operation and control of its project activities? (Describe).									
16	Is the appointed Quality Manager independent of day to day construction activities and ensuring the requirements of the quality plan are implemented and maintained?									
17	Does the appointed Quality Manager have the delegated authority to over-ride the site manager in the event of a quality problem on site?									
18	Have staff resources been allocated with clear responsibilities related to their assigned position?									
19	Do the staff resources allocated for the works have relevant skills and competencies / experience related to their assigned position?									
Meet and Collaborate										
20	• Are there regular meetings to collaborate on quality matters with the Principal and Consultant? • What frequency?									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
21	Are quality meetings held at regular intervals as per the Contract between the Principals' Site Representative and Contractor's Quality Manager (and respective support staff) to review actions/outcomes of previous week and focus on actions for weeks ahead?									
22	Are formal monthly meetings held and minuted, chaired by the Principal, with the Principals' Site Representatives and the Contractors Quality Manager (and their respective support staff).									
23	Are non-conformances, innovations, improvements, mitigation and corrective actions discussed / analysed in the monthly quality meetings?									
Quality Planning and Delivery										
24	Is progressive handover of completed deliverables achieved in line with the agreed programme?									
25	Is the WBS created to facilitate management of physical work packages and associated QA process and agreed with the Consultant?									
26	How has the organisation determined: • What will be done? • How the results will be evaluated? • Who will be responsible? • What resources will be required? And • When each will be completed?									
27	Is a process established for compilation, review and approval of work component or lot packages as per WBS?									
28	Are there hand-over procedures between									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
	field teams working in separate workflows and carried out effectively.									
29	Are Contract-specific Hold and Witness Points planned and reviewed in conjunction with the Principal and Consultant and obtain all necessary approvals?									
30	Once the Supplier has determined the contract requirements, does the organisation ensure: • the project / construction requirements are understood? • that any anomalies are resolved? And • that any applicable project / construction requirements, including statutory and regulatory requirements are considered, as well as those not specifically stated by the Principal?									
31	Do Variation Orders reflect specification and quality requirements in accordance with the contract documents? Have they been approved prior to the works being undertaken?									
32	Does the contractor's organisation retain documented information to demonstrate that any project / construction changes have been reviewed and authorised where necessary?									
Control of Externally Provided Construction Processes, Products, and Services										
33	Does the Supplier ensure that externally provided processes and services, conform to requirements?									
34	Does the Supplier determine and apply criteria for the evaluation, selection, monitoring of performance and re-evaluation of external providers?									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
35	Does the Supplier retain documented information of these activities and any necessary actions arising from the evaluations?									
36	Does the Supplier provide all necessary information to external providers, and are these handover procedures effective? (Describe methods used).									
Construction processes										
37	Has a Plateau test been carried out for earthworks or layer works in accordance with T24? If so, has this been approved by the Engineer, and properly executed to standard?									
38	Is the same construction methodology, using the same construction plant, being used as in the QMP, and/or the Plateau test"? is this effective?									
Inspection and Testing										
39	Is Inspection and Testing carried out as per Waka Kotahi Standard Z08 Inspection, sampling and testing?									
40	Is inspection and testing in accordance with referenced standards and completed by suitability skilled and experienced personnel and include, as appropriate, IANZ Accredited test results?									
41	Are the outcomes of the Inspection and Testing as per approved ITP reported to demonstrate to the Principal and Consultant that the contract deliverables are being delivered in accordance with specification?									
42	Do the controlled conditions include the availability and use of suitable monitoring and measuring resources, including									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
	any equipment requiring calibration, as applicable to each project?									
43	Has sign-off been achieved for contract specific Hold Points within the required time?									
44	Has feedback from Consultant-led RVT been responded to?									
45	Are all test records sent to the Principal, Contractor and Consultant by laboratory/testing agency simultaneously?									
46	Are test records and inspection checklists immediately available, complete, and signed off at the time of the works?									
47	• Does the Site manager, Supervisor and operational staff understand the inspection and testing requirements? • Examples of Open-ended questions to ask staff • Can you explain the steps to this process? • What Hold Points for inspections and testing are required for this process? • What are the acceptance criteria for this material or layer? • What records do you need to complete for this process or Hold Point?									
Material Traceability										
48	Are there procedures and methods provided for supplying evidence for the approved sourcing, supply, transport, storage and use of materials to demonstrate compliance with specified contract specification, standards and guidelines?									
49	Are warranties in favour of the Principal?									
50	Is all material used during construction traceable to evidence of compliance held on Quality File?									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
51	Are the Engineer's acceptance records for materials received and held on Quality File?									
Measure, Analyse and Improve Quality										
52	Is the quality information collected, analysed and reviewed and reported at Quality meetings?									
53	Is contract performance reported to Consultant against the specified contract deliverables, KPI, milestones and Hold Points?									
54	Are construction assumptions, calculations, estimates, drawings, reports and as-built documentation verified, including RAMM?									
55	Are internal and external audits conducted and reported?									
56	Are improvement opportunities identified and pursued?									
57	Are non-conformances and OFIs escalated nationally to the Quality manager, and has the process for continuous improvement been implemented for major non-conformances observed?									
Managing Non-Conformances and Corrective Actions										
58	Does the Quality Management Plan describe procedures for discovery and control of any work that is not conforming to specified requirements or designs?									
59	Has acceptance of remedial work as a Hold Point been released by Principal?									
60	Are processes in place to manage and implement corrective and preventative action in response to non-conformance?									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
61	Does the Supplier: • retain documented information of actions taken to correct any non – conformances? • does this include any concessions obtained from the Principal or end – client? (i.e., variation requests, etc.); and • does it also include the person or authority that made the decision on how to deal with the non-conformance(s)?									
62	Do corrective actions identified for non-conformances have the root-cause identified, and are they time-bound?									
63	What percentage of the Corrective Actions have been closed out and nationally reviewed within the deadline?									
64	Are processes in place to implement continuous improvement and lessons learnt in response to non-conformance, both at project level and at national level?									
65	Are remedial actions witnessed and confirmed by the Independent Reviewer?									
Quality Records										
66	Are digital and hard copy records from all Contract specific quality assurance and control activities kept in Quality File?									
67	Are Quality records traceable to material and products used during construction and linked to relevant ITP?									
68	Describe how the Supplier ensures suitably of documented information and record(s) is / are: • available where appropriate personnel are able to gain easy access? • suitably stored and legible?									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
	• readily retrievable? • retained for a specified period of time, taking into consideration regulatory requirements? And • disposed of in accordance with the organisation's documented method once its retention times have elapsed?									
69	Are Quality records accessible to the Principal and Consultant on a real time basis?									
70	At the end of the Contract, has the complete Quality File been handed to the Principal?									
Progressive Close-Out and Completion										
71	Are Construction and Design Certificates and/or Producer Statements prepared and delivered as specified in Contract?									
72	Are construction records certified by the Contractor as complete and compliant for each section of work at the time in which they were carried out/completed?									
73	At end of the contract is all quality information and records supplied as specified in the contract in an acceptable digital and/or hard copy format to the Principal?									
Management Review										
74	Does the Supplier's senior management review the Quality Management System at appropriate intervals to ensure its continuing suitability, adequacy, effectiveness, and alignment with the strategic directions of the organisation?									
75	Do the records (i.e. minutes) of management review meetings include information on:									

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		
	• client satisfaction and feedback from relevant interested parties? (i.e. compliments and complaints); • the extent to which Quality/ Project / Construction Objectives have been met? • project / construction performance and conformity to requirements? • non -conformities and corrective actions? • the performance of external providers? • the adequacy of resources, and any additional / future resource needs? • the effectiveness of actions taken to address risks and opportunities? And • opportunities for improvement?									

AUDITORS ADDITIONAL COMMENTS:

Question No	Audit question	Comments & examples	Availability of records		Audit Findings				Audit Evidence	Corrective Action Required
			Poor / Not available	Good / at hand	Compliant	Can Improve	Minor N/C	Major N/C		

Part 2: Audit Findings Summary

Manually transfer the audit findings from the audit checklist above into the audit findings summary tables below. At the end of the audit, create charts, summary tables and trend data may be created to include in the audit report, and the contract performance measurement score card.

Question No	Audit Findings				
	Compliant	OFI	Minor N/C	Major N/C	
Contractor's Quality Management Plan					
Lead and Direct Quality					
Quality Management Systems					

Question No	Audit Findings				
	Compliant	OFI	Minor N/C	Major N/C	
Meet and Collaborate					
Quality Planning and Delivery					
Inspection and Testing					

Question No	Audit Findings				
	Compliant	OFI	Minor N/C	Major N/C	
Material Traceability					
Measure, Analyse and Improve Quality					
Managing Non-Conformances and Corrective Actions					

Question No	Audit Findings				
	Compliant	OFI	Minor N/C	Major N/C	
Quality Records					
Progressive Close-Out and Completion					
People					

Question No	Audit Findings				
	Compliant	OFI	Minor N/C	Major N/C	
Management Review					
Other					

Appendix B – Typical Project Work Component Audit Questions

WORK COMPONENT PARTICULARS	
Audit No.	Site Engineer:
Project no.	Project Engineer:
Contractor:	Designer:
Asset Type:	Evaluated by:
Project Area:	Date:
Work Component Reference:	

PROJECT SET-UP STAGE AUDIT - Quality Audit prior to Construction Commencement	
1.0	Has the Construction Plan been reviewed and signed by all discipline representatives?
2.0	Has commencement been authorised by the Construction Manager or delegate?
3.0	Has the initial ITP been approved with all required signatories (e.g. Project Engineer / Quality Manager / Construction Manager)?
4.0	Have all pre-construction hold points been satisfied?
5.0	Have hold points been included in the ITP?
6.0	Has a QA tracker (tracking location/number of tests) been implemented?
7.0	Is there a full set of hard copy project drawings on site?
8.0	Is there a drawing register on site?
9.0	Is there a hard copy of relevant standard details and construction procedures (SOP's) on site?
10.0	Has a folder been created on site containing hard copy drawings for red lining purposes?
11.0	Have site quality meetings been set up (weekly or fortnightly)?
CONSTRUCTION STAGE QUALITY MONITORING AUDIT	
1.0	Does the site staff briefing plan cover quality aspects of the work being carried out?
2.0	Are all drawings and standard details on site the most up to date revision?
3.0	Is the ITP signed-off and available to the Site Engineer before work progresses on site?
4.0	Are Hold Points being correctly observed?
5.0	Is quality documentation being regularly (weekly) uploaded to the system (EDMS)?
6.0	Are certificates for material used on site available and does material comply with Principal standard or design specification?
7.0	Have defects / deviation from specification been recorded using the NCR system?
8.0	Is site set-out carried out by surveyor and checked?
9.0	Are test requests being made timely and is it traceable?
10.0	Are inspection and testing/quality records as per ITP requirements?
11.0	Have quality records been checked, signed and dated as works progress?
12.0	Has the designer/engineer been informed of any unacceptable test results via RFI?
13.0	Have records of any changes, including design related changes been recorded, approved and available on site?

14.0	Are red line drawings being progressively marked up? Has the latest deviation from design (check NCR/RFI) been captured in the red line drawings?
15.0	Are inspections and testing carried out by qualified people using calibrated equipment (Clegg hammer test, density tests, etc.)?
PROJECT CLOSE STAGE OUT AUDIT - Quality Audit at 80% or more Construction Completion	
1.0	Has the Construction Report been allocated to the responsible person for completion?
2.0	Has the ITP been closed out and signed off by the Quality Manager and Project Engineer?
3.0	Have all RFI's, NCR's and Work Scope Changes relating to the completed works been closed out?
4.0	Has a construction completion walkover with Quality Manager, Site / Project Engineer and Independent Reviewer been completed / organised?
5.0	Are the QA records on the system confirming compliance and are they representative of works being completed?
6.0	Has RAMM uptake been requested?
7.0	Are Red Line marked up drawings up to date?

Appendix C – Typical System Audit Report Index

Indicate the following information on the Quality Assurance Report as minimum:

- Organization name
- Project or division
- Audit date
- Auditor name/s
- Employee name/s
- Executive Summary
    - Why the audit was done
    - What was found
    - Recommendations
- Introduction
    - Type of audit
    - Audit Methodology
- Audit results
    - Notes taken
    - Section scores - Calculated from checklist in percentages
    - Number of NCRs,
    - Status of NCRs, and Corrective Actions,
    - The status of response to organization/auditor.
    - Submission of supporting documentation is not required.
- Discussion
    - Sections scores
    - Number and type of NCRs
    - Comparison of audit with previous 3 audits
        - NCRs and Corrective Actions flowing from previous audits.
        - Efficacy of the previous Corrective Actions undertaken, and changes to the QMS as a result.