

NZTA Z01-F:2025

Project Alliance Agreement Quality Management Specification

1. Scope

This Specification:

- a. sets out the requirements for quality management within Project Alliance Agreements (PAA).
- b. includes quality management requirements for design and other professional services, construction and validation of conformance to designs and specification.
- c. specifies the requirements for quality management of separable work portions or work packages of the Alliance's scope of work, as per work breakdown structure.

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

3. Definitions

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

Term	Definition
Alliance's Quality Manager	A Quality Manager appointed to act independently of day-to-day delivery activities and to ensure that the requirements of the quality plan are implemented and maintained.
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 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).
Construction Phase Services (CPS) team	<p>CPS is independent of the works and the team accountable for the following on Alliance projects:</p> <ul style="list-style-type: none"> • ensuring conformance with Alliance plans and specifications. • continuously review work procedures, construction materials and components. • inspecting site works at witness and hold points during construction. • inspecting site works upon completion for conformance with specifications.

Design Validation	Proof that the design can meet the requirements set out for it, i.e. design outputs are compliant with the Owner's design standards and requirements, inputs and suitability of the product or service for its intended use.'
Design and Professional Services Verification / Review	<p>Provide assurance and confirmation that design and professional services outputs meet the design inputs and verify that the design to be constructed:</p> <ul style="list-style-type: none"> • is traceable to design inputs. • meets all customer requirements. • is compliant with standards or codes. • is compliant with regulatory and statutory requirements. • is low-cost and value-for-money. • is constructible and maintainable.
Hold Point	A checkpoint in the construction process beyond which work cannot proceed until conformance 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 Alliances' delivery team's detailed plans for inspection and testing aimed at verifying and confirming with evidence to the OIM and AMT that the work has been delivered and is compliant with the specified requirements.
Non-compliance	Deviating from doing what is necessary to meet a specified (typically regulatory) requirement, obligation, or policy.
Non-conformance	Non-fulfilment of requirement (typically related to a management plan, process, or specification).
Non-conformance reports (NCR)	A document (report) that identifies 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.
Quality Management Plan (QMP)	The Plan prepared by the Alliance that covers the quality processes particular to the specific Project Alliance Agreement (PAA).
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.

Requests for Information (RFI)	Formal requests for specific information made by any party to the Agreement to any other party to the Agreement.
Value Engineering	Value engineering (VE) is the method that the Alliance team employs to improve the value of the project by examining the function of each item or element and its associated cost. By weighing the function-to-cost ratio, the team can make suggestions for alternate construction methods, designs, or materials that improve the value of the project.

4. General

- a. The Alliance is accountable for meeting the quality of work and activities delivered as defined in the Project Alliance Agreement (PAA).
- b. The Alliance must establish, implement and maintain a Quality Management System in accordance with the requirements of AS/NZS ISO 9001 and this Specification.
- c. The Alliance shall work collaboratively with the Owner Interface Manager (OIM) to deliver the required quality outcome.

5. Quality Management Plan

In addition to any requirements in the PAA documents, the Alliance QMP shall be approved by the Alliance Management Team (AMT) prior to any work starting, and shall as a minimum address the following Quality Management activities and requirements as detailed in this section:

- Lead and Direct Quality
- Enable the Delivery of Quality
- Quality Delivery
- Measure, Analyse and Improve Quality

5.1 Lead and Direct Quality

- a. Define overarching quality policy and specific quality objectives for the PAA, and how these will be delivered.
- b. Set-out the approach and framework for measuring and reporting on performance and compliance to specified requirements.
- c. Identify uncertainty in achieving specified requirements for the works, where the scope of works are the products and services associated with the PAA.
- d. Conduct Quality Management Reviews on a regular basis considering the results from quality assurance and control activities, including internal reviews, contract reviews, management system audits, and performance against Quality objectives.
- e. Specify requirements for a systematic and measurable process of independent monitoring and reporting of quality assurance systems and performance.

5.2 Enable the Delivery of Quality

5.2.1 Quality Management Systems

- a. Address risks to achieving specified outcomes when detailing the systems, procedures, plans, methods and equipment to be used by the Alliance and their Sub-contractors, to deliver the PAA Works (or parts there-of).
- b. Develop and implement a QMP in context and specific to the Alliance works.

- c. Control Alliance specific documented information.
- d. Providing procedures describing best design and construction practices.
- e. Provide a system for assuring quality data is collected and maintained for use of effective and efficient asset management decision making.
- f. Providing a procedure for the progressive closeout and handover of the project or portions thereof.

5.2.2 Roles and Responsibilities

- a. Clearly define roles, responsibilities and authorities for Alliance staff and external suppliers involved in specific quality management activities or whose roles have a direct impact on the quality of delivery.
- b. Determine the skills, training, experience, and competency required for each role and resource, and equip the Alliance accordingly to achieve planned quality outcomes.
- c. The appointed Quality Manager shall act independently of day-to-day activities and to ensure that the requirements of the QMP are implemented and maintained.
- d. Implement and manage ongoing staff training in systems, procedures, plans, methods, standards, guidelines, and equipment that can impact delivery quality of the Works.

5.2.3 Meet and collaborate

- a. Meet and collaborate regularly on quality matters. The agenda and schedule shall be agreed with the OIM, as well as reporting requirements by the design and delivery teams to serve as input into these meetings. Quality meetings are to be held regularly, and minutes kept.
- b. Involve representative personnel in meetings to promote better collaboration between all involved parties.
- c. Discuss design and delivery performance with regards to quality objectives.
- d. Identify risks to achieving quality outcomes and measures implemented or needed to control these risks.
- e. Focussed meetings are to be held to discuss significant quality incidents.
- f. Include quality topics during daily prestart meetings.

5.3 Design and other Professional Services Quality

Define the organisation and responsibility, the resources, the task sequences and all the mandatory steps with regards to design and professional services, and development for the scope of work. Include in the QMP:

- a. the design and development team structure and communication channels.
- b. the scope of work and timeframe.
- c. the scope of services.
- d. all identified and applicable standards, specifications, legal and other requirements, including consents applying to the design scope of work.
- e. a work breakdown structure.
- f. risks of design and development not meeting the design and subsequent construction output requirements, including safety, constructability, and maintenance.
- g. design and professional services processes and/or methodologies across the different design and development phases,
- h. value engineering workshops, taking into account constructability challenges.

- i. plan and other deliverable checks, reviews and verification at various stages of design and development, including the Owner's audits and reviews.
- j. the design, professional services and development, collaboration and document control systems (software) to be used.
- k. the processes for:
 - Design and professional services deliverable approval.
 - Design and professional services certification.
 - Design and professional services change management.
 - Design and professional services validation.
- l. design delivery for construction (issue/approve for construction).
- m. the final design report shall include all risks to be taken forward into the physical works phase.
- n. design and professional services close-out.

5.4 Construction Quality

5.4.1 Quality Planning and Delivery

- a. Plan and deliver the Alliance works in compliance with the requirements specified within the PAA.
- b. Utilise the Alliance's work breakdown structure (WBS) to facilitate the management of the physical work packages and associated quality assurance (QA) processes for delivering the works, the progressive verification and completion thereof.
- c. Establish a process for the compilation, review and approval of construction work packages as per WBS (See Section 6 of this Specification).
- d. Plan and qualify the key on-site construction processes, including methodology, material, plant and operators, e.g.:
 - layer compaction – plateau tests.
 - chip seal – spray and chip schedule, etc.
- e. Plan and review specific hold and witness points in conjunction with the CPS team and obtain all necessary approvals to proceed.
- f. Plan the close-out of discrete work packages in collaboration with the CPS team to ensure timely sign-off of complete and compliant works.

5.4.2 Inspection and Testing

- a. Inspection and testing shall be carried out as per NZTA Standard Z08: *Inspection, sampling and testing*, Technical Specifications, and works specific ITP.
- b. Inspection and testing shall be in accordance with a clear and concise list of referenced regional, national or international standards, completed by suitably skilled and experienced personnel, and include as appropriate IANZ Accredited test results.
- c. Undertake and report on the outcomes of the Inspection and Testing as per approved ITP in order to provide explicit, unambiguous evidence to demonstrate to the CPS team that the works are being delivered in accordance with specification and designer's intent.
- d. Undertake and obtain specific hold point sign-off, including consideration of feedback from RVT testing, and thereby confirming approval to proceed with the construction process.
- e. Respond to feedback from the CPS Consultant led RVT to reaffirm that the works are being delivered in accordance with the specification and the design intent.

- f. All test records, including test reports from IANZ accredited testing laboratories, pass or fail, shall be available to the CPS team and the delivery team immediately after the tests.

5.4.3 Material Traceability and Preservation

- a. Provide procedures and methods, for supply, handling, transport, storage and use of materials needed to demonstrate conformance with specifications, standards and guidelines.
- b. Provide consent approvals and records for both sourcing and disposal of material, where appropriate.
- c. All material used during construction shall be traceable to evidence of conformance held on the Quality File.

5.4.4 Reporting

- a. Quality reporting shall be included into monthly Alliance management and board reports and should as a minimum cover:
 - A summary of inspection and test results for the reporting period and should include both pass and fail test results.
 - Results from independent random verification tests (RVT) obtained from the CPS team.
 - A summary of the cause and impact of NCR's raised during the reporting period, as well as a status report on the NCR register in terms of open, outstanding and closed reports (time to close-out NCR's).
 - A summary of the reason and impact of RFI's raised during the reporting period, as well as a status report on the RFI register in terms of open, outstanding and closed reports.
 - A summary of Notices to OIM / Alliance raised during the reporting period.
 - Report on improvement initiatives.
 - Report on ongoing quality performance against delivery requirements.
 - Report on the status of quality risks.
 - General condition of work sites.
- b. Verification of design and construction assumptions, calculations, estimates, drawings, reports and as-built documentation, including asset data.
- c. Report on external audit results.
- d. Conduct and report on internal audits with the purpose of confirming adequacy of the quality management system and processes, with specific focus on:
 - Construction work component planning
 - Inspection and testing
 - Material conformance
 - The completeness of quality records and verification of conformance
 - Adherence to the quality system and construction processes.
 - Document control.
 - Change management.

5.5 Measure, Analyse and Report on Quality and Improvement

- a. The Alliance shall collect, analyse and review quality information generated during design and development, construction and construction monitoring processes, and report on these to the OIM, AMT and for discussion at Quality Meetings.
- b. Conduct and report on internal and external audits with the purpose of confirming conformance with specifications and other requirements.
- c. Report on ongoing Alliance performance against the specified deliverables, milestones and Hold Points.
- d. Quality information shall be used as input to regular reviews by Alliance management as described in Paragraph 5.1.d. to improve the quality management system, products and services.

5.6 Managing Non-Conformances

- a. The QMP shall describe procedures for discovery and control of any work that is not conforming to specified requirements or designs, or where agreed procedures were not followed.
- b. All non-conformances shall be recorded, investigated, and remedial action agreed by the OIM, or as delegated.
- c. Manage and implement remedial action, continuous improvement and lessons learnt migration in response to non-conformance when and wherever this occurs.
- d. Remedial action is witnessed and/or confirmed by the CPS Consultant. Acceptance of remedial work shall be a Hold Point to be released by the OIM, or as delegated.

See *NZTA Z08 – Standard for inspection, sampling and testing* for more detail on requirements for handling non-conformance to a specification or other compliance requirements.

5.7 Quality Records

- a. Keep digital records from all quality assurance and control activities in a Quality File, to thereby:
 - comply with the PAA requirements and this QMP.
 - provide explicit evidence of conformance to designs and specifications.
- b. Ensure that the Quality File is always accessible to all participating in the design, construction and construction monitoring phases, including the OIM. All information serving as input to design and development must be included in the Quality File.
- c. Compile design information and reports, including what need to go into the Asset Owner's Manual (AOM).
- d. Quality records shall be traceable to material and products used during construction and linked to relevant ITP.
- e. Ensure that quality records are accessible to the OIM and Construction Quality Advisor on a real time basis by way of agreed "Cloud" or "Intranet" based recording system and distribution.
- f. At the end of the PAA, the complete Quality File remains with the Owner.

5.8 Progressive Close-Out and Completion

- a. Prepare and deliver Design and Construction Certificates and/or Producer Statements as applicable for specified deliverables.
- b. Construction records shall be signed off by the Alliance as complete and compliant for each section of work being completed as part of the Alliance's progressive closeout procedure.
- c. Before the final design and construction reports are approved, supply all quality information and records as specified in the PAA in acceptable digital format to CPS and the OIM for review.
- d. At the end of the PAA works, before Practical Completion is agreed, supply all quality information and records as specified in the PAA in acceptable digital format to the Owner, as the completed Quality File.

- e. During the defect liability period, minor defects and small omissions (snag list items) shall be closed out.
- f. At the end of defects liability period, a final review and walk over with the OIM and Maintenance and Operations team to confirm all deliverables as defined in the PAA have been met and signed off for Final Completion.

6. Quality Planning for Separable Work Packages

6.1 General

The Alliance shall prepare Construction Work Plans (CWP) for separable portions or discreet work packages which shall as a minimum address the following activities and requirements:

6.2 Review and Approval of the CWP

The Alliance's delivery team responsible for the work package shall develop a CWP.

- a. The CWP shall be reviewed and signed-off by the discipline* leads or their representatives involved in the specific scope of works, as well as by CPS to ensure proper planning of all project aspects.
- b. The CWP shall be approved by the person authorised by the AMT prior to works commencement, and available at the place of work to those involved in the works.
- c. Updates to the CWP shall be reviewed and approved.

Note* *Disciplines involved in the works can include Quality, Environmental, H&S, Stakeholder / Communications, Traffic, Design, Construction, CPS and others.*

6.3 Scope and Overview

The scope of the works covered by the CWP shall clearly define the boundaries of the works, magnitude, construction components or elements, as well as what is out of scope where applicable.

The CWP shall include an overview of the project to provide context of what the works entail. This can include:

- a. Nature, location and terrain situation
- b. Project start and end date
- c. Critical dates, e.g. long lead items
- d. Design outcomes sought:
 - The design report and drawings
 - Design assumptions
 - Material parameters/specifications
 - Construction methodology considerations
- e. Construction components
- f. Other works in the project vicinity to be considered.

6.4 Risk Assessment

The delivery team shall conduct a risk assessment applicable to the specific works considering the following risk groups:

- a. Design risk

- b. Management risk
- c. Construction risk
- d. Quality and other compliance risk
- e. Stakeholder risk

6.5 Methodology statement

The methodology statement shall be clear on:

- a. Site pre-construction conformance requirements such as stakeholder communication, site set up, mark-outs, traffic management, and environmental controls.
- b. Any processes required to be qualified pre-construction, such as:
 - o layer construction (i.e. plateau tests)
 - o stabilisation
 - o sealing – spray and chip
- c. The steps in sequence to be followed for executing the works within scope.
- d. Task descriptions to allow the person or crew responsible to accurately carry out the works as planned. Use sketches or diagrams to explain the works where necessary.
- e. Responsibilities for each step or task.
- f. Referring to the design specifications and documentation.
- g. Actions following completion of the works, e.g., site decommissioning, tidying up and records management.

6.6 Resource requirements

The CWP shall outline the resources required to carry out the works, including:

- a. work crew members with the required competency and experience,
- b. subcontractors and material suppliers,
- c. Quality Manager or Engineer independent of day-to-day construction activity,
- d. competent site supervision,
- e. plant and machinery and the maintenance thereof,
- f. construction material and its delivery to site, including storage and preservation requirements.

Note: Resource allocation shall align with those determined during process qualifications.

6.7 Team briefing

- a. The plan shall state the format, timing and frequency of team briefings to ensure that those involved in carrying out the works are clear on their roles and responsibilities and objectives to be achieved.
- b. What resources are allocated to the works.
- c. Briefings shall highlight task relevant hazards and risks.
- d. Records of team briefings shall be kept, including names of the attendees.

6.8 Quality Assurance and Control

- a. The CWP shall define how construction quality is controlled by means of an Inspection and Test

Plan (ITP), approved for the project works. The ITPs shall meet the requirements of *NZTA Z08: Standard for Inspection, Sampling and Testing*.

- b. The ITPs shall cover all the works described in the project scope of works and methodology statement.
- c. The Alliance shall have a plan to review conformance to the project quality plan and quality systems. This plan shall include all subcontracted works.
- d. The Alliance shall collect, analyse and review quality information generated during the project to ensure conformance and for improvement opportunities.
- e. All non-conformance to specifications and deviation from processes shall be captured within the Alliance's non-conformance system.

6.9 Works Close-out and Handover

The CWP shall define the following:

- a. completion requirements to be met before closing-out the CWP works,
- b. process to be followed to close out the CWP, including check lists,
- c. reports, records and certificates to be handed over to CPS for review and sign-off. The format of these must be agreed with the OIM at the start of the project.
- d. the recipient of the completed project works. Take note that there might be additional works required before assets can be handed over to the Owner or end user.

6.10 Support Documents

Documents needed for executing the project works in support of the CWP shall be available, and controlled to ensure works are carried out to the relevant versions of these documents. These typically include:

- a. Resource consents
- b. Programme
- c. Resources plan
- d. Inspection and Test Plan (See Z08 – Standard for inspection, sampling and testing)
- e. Communication Plan / Works start notice
- f. Traffic Management Plan
- g. Plans for managing relevant environmental aspects
- h. Temporary Works
- i. Permits
- j. Construction Drawings
- k. Crew briefing plans

7. Construction Phases Services (CPS)

7.1 General

This section of the Specification relates to construction monitoring and quality assurance by the CPS team. The CPS Lead/Manager is appointed by the AMT or OIM, who may also appoint CPS Consultants as deemed necessary for the specific components of Alliance works. General requirements for this section are:

- a. A CPS QMP:
 - shall be developed in accordance with this Standard, the PAA requirements and the construction monitoring level (e.g. CM3/4/5) required to provide confidence that Alliance works meet specified requirements.
 - shall be developed in collaboration with the Design and Construction Leads and be approved by the OIM within 1 month of signing the PAA.
 - shall define the methods and procedures that will satisfy conformance with specified requirements and used to objectively measure and report on the performance of the Alliance's QMP.
 - shall include resource allocation required for agreed level of quality assurance and control.
 - shall identify and agree with the designer what information is required from the delivery teams.
 - 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 CPS Consultant(s) shall be appropriately experienced for the specific Alliance Works, or portions thereof.
- c. Construction monitoring and Alliance quality assurance shall be objective and systematic, following a targeted, and risk-based approach. Appropriate intervals will be agreed when producing the CPS QMP.
- d. Since the CPS QMP is risk based, it needs to be reviewed and agreed with the OIM at appropriate intervals to ensure the level of activity aligns with the risk profile.
- e. The CPS Lead/Manager shall ensure all personnel involved in construction monitoring and quality assurance roles are fully informed of the Alliance requirements to which the services relate.

7.2 Construction Monitoring and Quality Assurance Services

The scope of the CPS shall include the following activities and responsibilities as identified and agreed by the AMT as suitable for the Alliance. The AMT may identify other activities and responsibilities as deems necessary:

7.2.1 Management Plan Reviews

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

7.2.2 Owner Supplied Documentation Reviews

- a. Review of the Owner supplied documentation (drawings and specifications) for an understanding of the quality requirements, including identification of assets and asset components and sub-components within the Alliance'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 works scope changes.

7.2.3 Facilitation of design interpretation

- a. Design advice to assure Alliance's correct interpretation and understanding of the design and intent.

- b. Resolving of quality issues between design and delivery teams.
- c. Facilitate Requests for Information (RFI) between the delivery teams and the designers where ambiguity or additional information is required. Construction instructions, where required, shall be issued by CPS or the designer.

7.2.4 Design change management

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

7.2.5 Quality Risk Management

- a. Develop and maintain the Alliance Quality Risk Register (it can be part of the overarching Alliance Risk Register).
- b. Ensure that design risks are added to the project Risk Register.
- c. Confirmation that quality risks are addressed by the Alliance through construction planning or other mechanisms appropriate to the risk.

7.2.6 Construction Plans Review

- a. Review of the Alliance's 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 ITP's (and subsequent revisions) to ensure relevant quality controls are in place to confirm conformance with the PAA (including temporary works) and other requirements specified by the designer, including hold/witness points.

7.2.7 Quality Assurance Evaluation

- a. Provide assurance that 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 Alliance for completeness and compliance to allow the PS4 to be signed.

7.2.8 Construction monitoring as 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 Alliance's QA system, and the consequences of defects considering the nature of the asset components being constructed.

Apply the CPS QMP to provide confidence that completed works comply with drawings, specifications and delivery 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 CPS QMP and attend Hold/Witness Points at an agreed notice.

- b. Ensuring all site visits are well documented and shared with the delivery teams and OIM.
- c. Providing as part of every inspection (where necessary) written instructions to the delivery team indicating what action needs to be taken, including corrective actions and re-inspections where required, and provide a copy to the OIM.
- d. Ensuring that the OIM is informed of ongoing inspections to participate in, if required.

7.2.9 Quality File Reviews

- a. Review and analyse the Alliance'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 Alliance Agreement 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 Alliance 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 Construction Review (PS4) or as appropriate to the Alliance.

7.2.10 Non-conformance oversight and advice

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

7.2.11 Random Verification Testing (RVT)

- a. As part of the CPS QMP a risk-based schedule for RVT 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 delivery teams involved,
 - the risk associated with specific construction components,
 - and to optimise the application of Owner's funding in this work.
- The proposed RVT shall be discussed with the OIM and on acceptance, notify the delivery teams before implementing it in accordance with the above requirements.
- b. Implementing the RVT Schedule.

- c. 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 OIM approval based on the quality results.
- d. Carry out RVT sample taking for laboratory tests, and sampling and testing during normal visits to the work site.
- e. 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 Alliance.

7.2.12 Reporting on quality performance

- a. Summarise the results of quality assurance and control activities and report to AMT and OIM on an agreed frequency.
- b. Conduct regular Alliance performance evaluations in accordance with Z11.

7.2.13 Certification of physical works

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

7.2.14 Facilitation of handover and close-out

- a. At the outset of construction, agree with parties what information and documentation are required for handover and closeout of construction activities.
- b. Review Alliance records for completeness and conformance as requirement of the Alliance'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 designers and delivery teams.
- d. Arrange detailed inspections for portions of the works or the entire project with the OIM and Network Management Construction Quality Advisor to compile a minor omissions and minor defects 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 Alliance 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.

7.2.15 Reporting and Debrief

- a. Summarise and report to the CPS Lead and AMT on the effectiveness and efficiency of the Alliance 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 OIM for the benefit of future projects.