

Municipal Infrastructure Technical Specification 00B

Quality Construction

Edition 1 Revision 2

September 2026

ACT Government

Machinery of Government changes: On 1 July 2025, administrative arrangements were made to establish the City and Environment Directorate (CED). As of the date of publication of this document, the transition from Transport Canberra and City Services (TCCS) to CED, including updates to internal organisational structure, are yet to be finalised. References in this document to the organisation TCCS are to mean CED.

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Revision register

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1/1	All	Template update and web accessibility	Tim Rampton	July 2025
	All	Cross reference links updated		
	–	Acknowledgement of Country added		
	All	References to RMS updated to TfNSW		
	All	General amendments to align with layout and structure of Municipal Infrastructure Technical Specifications documents, that are non-technical in nature		
	All	Updates to references to Australian Standards relating to quality management systems, including *AS/NZS ISO 9001*, *AS ISO 10005* and *AS/NZS ISO 10013*		
	1.1.2	Cross references updated		

Edition/Revision number	Clause number	Description of revision	Authorised by	Date
	1.1.3	Referenced documents, including standards and guidelines, updated		
	1.1.4.1	Minor update to guidance on proprietary products		
	1.1.5	Abbreviations and definitions updated		
	1.2.2.3	Inclusion of reference to asset specific Project Quality Plan requirements in *MITS 10*		
	1.3.1.1	Update to reference to TCCS *Ref 08*		
	Annexure C – General	Update to contract requirements summary table		
	Sub-annexure C9	Update to test frequency requirements for concrete kerbs, open drains and paving works. Update to table heading and applicable specifications.		
	Sub-annexure C10	Update to table headings and applicable specifications		
	Sub-annexure C11	Update to test frequency requirements for concrete pathways and cycleways. Update to table heading and applicable specifications.		
	Sub-annexure C13	Inclusion of new test frequency requirements for concrete for general works		
1/2	1.2.6.1	Sampling location requirements updated to reference random sampling methods	Tim Rampton	September 2026
	1.2.6.5	Random sampling requirements expanded to all in situ materials		
	Annexure C	Flexible pavement reference in the contract requirements summary updated		
	Sub-annexure C1	Earthworks and Selected Material Zone testing requirements and frequencies updated		
	Sub-annexure C3	Filter and drainage layer material test requirements and density test method updated		
	Sub-annexure C5	Testing requirements expanded and updated for all flexible pavement works		

Acknowledgement of Country

City and Environment Directorate (CED) acknowledges that Aboriginal people are the Traditional Owners of Australia. We acknowledge and pay respect to the Ngunnawal people as the custodians of the land and waters that we live and thrive on today and recognise any other people or families with connection to the lands of the ACT and region.

CED acknowledges that Canberra's cultural and natural heritage was maintained by the Traditional Custodians for many generations before colonial settlement on Australian soil. Aboriginal people's management of the land preserved the natural balance of local plants and animals. This knowledge of the environment in which we live is critical to the protection and restoration of our land today.

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1 Quality construction

1.1 General

1.1.1 Responsibilities

1.1.1.1 General

Requirement: Establish, implement and maintain a quality management system (QMS) that provides confidence to the Principal of the following:

(a) The product specified can be produced.

(b) Critical processes are under control.

(c) Product performance has been confirmed.

1.1.2 Cross references

General: The following documents are related to this Specification. The latest version of the documents is to be adopted.

1.1.2.1 Technical Specifications

Requirement: The following Technical Specifications must be conformed to:

MITS 00 Preliminaries
MITS 01 Traffic Management
MITS 02 Earthworks
MITS 03 Underground Services
MITS 04 Flexible Pavements
MITS 05 Sportsgrounds
MITS 06 Concrete Kerbs, Footpaths and Minor Works
MITS 07 Segmental Paving
MITS 08 Incidental Works
MITS 09 Landscape
MITS 10 Concrete for General Works
MITS 11 Pavement Marking
MITS 12 Public Lighting
MITS 13 Traffic Signals
MITS 14 Road Signs
MITS 15 Street Furniture
MITS 16 Stormwater

The full list of Technical Specifications can be accessed via the TCCS website.

1.1.2.2 Design Standards

General: The full list of Design Standards can be accessed via the TCCS website.

1.1.2.3 TCCS Reference Documents

General: The full list of TCCS Reference Documents can be accessed via the TCCS website.

1.1.3 Referenced documents[1]

General: The following documents are incorporated into this Specification by reference:

1.1.3.1 Australian Standards

AS 1012	Methods of testing concrete (Set)
AS 1012.1	Methods of testing concrete: Method 1: Sampling of concrete
AS 1012.3.1	Methods of testing concrete: Method 3.1: Determination of properties related to the consistency of concrete – Slump test
AS 1012.4.2	Methods of testing concrete: Method 4.2: Determination of air content of freshly mixed concrete – Measuring reduction in air pressure in chamber above concrete
AS 1012.8.1	Methods of testing concrete: Method 8.1: Method for making and curing concrete – Compression and indirect tensile test specimens
AS 1012.9	Methods of testing concrete: Method 9: Compressive strength tests – Concrete, mortar and grout specimens
AS 1012.12.2	Methods of testing concrete: Method 12.2: Determination of mass per unit volume of hardened concrete – Water displacement method
AS 1012.14	Methods of testing concrete: Method 14: Method for securing and testing cores from hardened concrete for compressive strength and mass per unit volume
AS 1012.25.1	Methods of testing concrete: Method 25.1: Determination of the fibre content of plastic state concrete (wash-out test)
AS 1141	Methods for sampling and testing aggregates (Set)
AS 1141.6.1	Methods for sampling and testing aggregates: Method 6.1: Particle density and water absorption of coarse aggregate – Weighing-in-water method
AS 1141.11.1	Methods for sampling and testing aggregates: Method 11.1: Particle size distribution – Sieving method
AS 1141.14	Methods for sampling and testing aggregates: Method 14: Particle shape, by proportional caliper
AS 1141.22	Methods for sampling and testing aggregates: Method 22: Wet/dry strength variation
AS 1141.23	Methods for sampling and testing aggregates: Method 23: Los Angeles value
AS 1141.36	Methods for sampling and testing aggregates: Method 36: Sulfur in metallurgical slag, crushed rock or other pavement materials
AS 1141.52	Methods for sampling and testing aggregates: Method 52: Unconfined cohesion of compacted pavement materials
AS/NZS 1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series) (ISO 10684:2004, MOD)
AS 1289	Methods of testing soils for engineering purposes (Set)
AS 1289.1.4.1	Methods of testing soils for engineering purposes: Method 1.4.1: Sampling and preparation of soils – Selection of sampling or test sites – Random number method

[1] Not all the documents are specifically referenced in the body of this Specification. However, they may be relied upon depending on the nature of the Works.

AS 1289.2.1.1	Methods of testing soils for engineering purposes: Method 2.1.1: Soil moisture content tests – Determination of the moisture content of a soil – Oven drying method (standard method)
AS 1289.3.1.1	Methods of testing soils for engineering purposes: Method 3.1.1: Soil classification tests – Determination of the liquid limit of a soil – Four point Casagrande method
AS 1289.3.3.1	Methods of testing soils for engineering purposes: Method 3.3.1: Soil classification tests – Calculation of the plasticity index of a soil
AS 1289.3.4.1	Methods of testing soils for engineering purposes: Method 3.4.1: Soil classification tests – Determination of the linear shrinkage of a soil – Standard method
AS 1289.3.6.1	Methods of testing soils for engineering purposes: Method 3.6.1: Soil classification tests – Determination of the particle size distribution of a soil – Standard method of analysis by sieving
AS 1289.4.2.1	Methods of testing soils for engineering purposes: Method 4.2.1: Soil chemical tests – Determination of the sulfate content of a natural soil and the sulfate content of the groundwater – Normal method
AS 1289.4.3.1	Methods of testing soils for engineering purposes: Method 4.3.1: Soil chemical tests – Determination of the pH value of a soil – Electrometric method
AS 1289.4.4.1	Methods of testing soils for engineering purposes: Method 4.4.1: Soil chemical tests – Determination of the electrical resistivity of a soil – Method for fine granular materials
AS 1289.5.1.1	Methods of testing soils for engineering purposes: Method 5.1.1: Soil compaction and density tests – Determination of the dry density/moisture content relation of a soil using standard compactive effort
AS 1289.5.2.1	Methods of testing soils for engineering purposes: Method 5.2.1: Soil compaction and density tests – Determination of the dry density/moisture content relation of a soil using modified compactive effort
AS 1289.5.3.2	Methods of testing soils for engineering purposes: Method 5.3.2: Soil compaction and density tests – Determination of the field density of a soil – Sand replacement method using a sand pouring can, with or without a volume displacer
AS 1289.5.4.1	Methods of testing soils for engineering purposes: Method 5.4.1: Soil compaction and density tests – Compaction control test – Dry density ratio, moisture variation and moisture ratio
AS 1289.5.6.1	Methods of testing soils for engineering purposes: Method 5.6.1: Soil compaction and density tests – Compaction control test – Density index method for a cohesionless material
AS 1289.5.7.1	Methods of testing soils for engineering purposes: Method 5.7.1: Soil compaction and density tests – Compaction control test – Hilf density ratio and Hilf moisture variation (rapid method)
AS 1289.5.8.1	Methods of testing soils for engineering purposes: Method 5.8.1: Soil compaction and density tests – Determination of field density and field moisture content of a soil using a nuclear surface moisture-Density gauge – Direct transmission mode
AS 1289.6.1.1	Methods of testing soils for engineering purposes: Method 6.1.1: Soil strength and consolidation tests – Determination of the California Bearing Ratio of a soil – Standard laboratory method for a remoulded specimen
AS 1379	Specification and supply of concrete
AS 1627.9	Metal finishing – Preparation and pretreatment of surfaces: Part 9: Pictorial surface preparation standards for painting steel surfaces
AS 1743	Road signs – Specifications
AS/NZS 1866	Aluminium and aluminium alloys – Extruded rod, bar, solid and hollow shapes

AS/NZS 2311	Guide to the painting of buildings
AS 2350	Methods of testing portland and blended cements (Set)
AS/NZS 2350.4	Methods of testing portland, blended and masonry cements: Method 4: Setting time
AS/NZS 3582.1	Supplementary cementitious materials: Part 1: Fly ash
AS 3582.2	Supplementary cementitious materials: Part 2: Slag – Ground granulated blast-furnace
AS 3583.1	Methods of test for supplementary cementitious materials for use with portland and blended cement: Method 1: Determination of fineness by the 45 micrometre sieve
AS 3583.2	Methods of test for supplementary cementitious materials for use with portland cement: Method 2: Determination of moisture content
AS 3583.12	Methods of test for supplementary cementitious materials for use with portland cement: Method 12: Determination of available alkali
AS 3583.13	Methods of test for supplementary cementitious materials for use with portland cement: Method 13: Determination of chloride ion content
AS 3583.14	Methods of test for supplementary cementitious materials for use with portland cement: Method 14: Determination of insoluble residue content
AS 3972	General purpose and blended cements
AS 4422	Playground surfacing – Specifications, requirements and test method
AS 4454	Compost, soil conditioners and mulches
AS/NZS 4680	Hot-dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods
AS 4685	Playground equipment and surfacing (Set)
AS 4964	Method for the qualitative identification of asbestos in bulk samples
AS 5101.4	Methods for preparation and testing of stabilized materials: Method 4: Unconfined compressive strength of compacted materials
AS/NZS ISO 9000	Quality management systems – Fundamentals and vocabulary
AS/NZS ISO 9001	Quality management systems – Requirements
AS ISO 10005	Quality management – Guidelines for quality plans
AS/NZS ISO 10013	Quality management systems – Guidance for documented information
AS/NZS ISO 19011	Guidelines for auditing management systems

1.1.3.2 TfNSW Specifications

TfNSW Specification 3051	Granular Pavement Base and Subbase Materials
TfNSW Specification 3071	Selected Material for Earthworks
TfNSW Specification 3151	Aggregate for Sprayed Bituminous Surfacing
TfNSW Specification 3152	Aggregates for Asphalt
TfNSW Specification 3153	Reclaimed Asphalt Pavement Material
TfNSW Specification 3154	Granulated Glass Aggregate
TfNSW Specification 3211	Cementitious Materials, Binders and Fillers
TfNSW Specification 3253	Bitumen for Pavements
TfNSW Specification 3256	Crumb Rubber
TfNSW Specification ATS-3450	Microsurfacing
TfNSW Specification Q6	Quality Management (Major Works)
TfNSW Specification R106	Sprayed Bituminous Surfacing (with Cutback Bitumen)
TfNSW Specification R107	Sprayed Bituminous Surfacing (with Polymer Modified Binder)

TfNSW Specification R110	Coloured Surface Coatings for Bus Lanes and Cycleways
TfNSW Specification R111	Sprayed Bituminous Surfacing (with Bitumen Emulsion)
TfNSW Specification R116	Heavy Duty Dense Graded Asphalt
TfNSW Specification R117	Light Duty Dense Graded Asphalt
TfNSW Specification R118	Crumb Rubber Asphalt
TfNSW Specification R119	Open Graded Asphalt
TfNSW Specification R121	Stone Mastic Asphalt
TfNSW Specification R123	Thin Open Graded Asphalt Surfacing
TfNSW Specification R126	High Modulus Asphalt (EME2)
TfNSW Specification R71	Construction of Unbound and Modified Pavement Course
TfNSW Specification R73	Plant Mixed Heavily Bound Pavement Course
TfNSW Specification R75	Insitu Pavement Stabilisation Using Slow Setting Binders
TfNSW Specification R76	Insitu Pavement Stabilisation Using Foamed Bitumen

1.1.3.3 TfNSW Test Methods

TfNSW T106	Coarse particle size distribution of road construction materials (by washing)
TfNSW T109	Plastic limit and plasticity index of road construction materials
TfNSW T111	Dry density/moisture relationship of road construction materials
TfNSW T112	Dry density/moisture relationship of road construction materials (Modified compaction)
TfNSW T117	California bearing ratio of remoulded specimens of road construction material
TfNSW T119	Field density of road construction materials (Sand replacement method)
TfNSW T120	Moisture content of road construction materials (Standard method)
TfNSW T121	Moisture content of road construction materials (Sand bath or hot plate method)
TfNSW T130	Dry density/moisture relationship of road construction materials (Blended in the laboratory with cementitious binders)
TfNSW T162	Compaction control test (rapid method)
TfNSW T171	Modified Texas triaxial compression test for pavement materials
TfNSW T173	Field wet density of road construction materials (Nuclear gauge in direct transmission method)
TfNSW T180	Moisture content of road construction materials (microwave oven method)
TfNSW T192	Determination of the texture depth of road surfacing by the TRL mini texture meter
TfNSW T201	Particle distribution of aggregates (by washing)
TfNSW T203	Particle distribution of aggregates finer than 75 µm (by washing)
TfNSW T215	Wet/dry strength variation
TfNSW T223	Determination of the point load strength of rock specimens
TfNSW T231	Frictional resistance of road surfaces by pendulum tester
TfNSW T240	Road surface texture depth (sand patch)
TfNSW T276	Foreign materials content of recycled crushed concrete
TfNSW T280	Determination of maximum particle dimension of road construction materials by direct measurement
TfNSW T304	Moulding of concrete specimens for testing in compression, indirect tension and flexure
TfNSW T432	Rate of slaking of quicklime

1.1.3.4 Other publications

ASTM D7428 Standard Test Method for Resistance of Fine Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus

1.1.4 Standards

1.1.4.1 General

Standard: To *AS/NZS ISO 9001*.

Proprietary products: Email CED.RoadStandards@act.gov.au for advice on proprietary products.

1.1.5 Interpretation

1.1.5.1 Abbreviations

General: For the purposes of this Specification, the following abbreviations apply:

ACT	Australian Capital Territory
AS	Australian Standard
ASTM	ASTM International (formerly American Society for Testing and Materials)
BPN	British Pendulum Number
CAR	Corrective Action Request
CBR	California Bearing Ratio
CED	City and Environment Directorate
ISO	International Organization of Standardization
ITP	Inspection and Test Plan
MIS	Municipal Infrastructure Standard
MITS	Municipal Infrastructure Technical Specification
NATA	National Association of Testing Authorities
NBN	National Broadband Network
NCR	Non-Conformance Report
NNC	Notice of Non-conformance
NZS	New Zealand Standard
PAP	Principal's Authorised Person
pH	Potential of Hydrogen
QAR	Quality Assurance Representative (Principal)
QMR	Quality Management Representative (Contractor)
QMS	Quality Management System
TCCS	Transport Canberra and City Services, ACT Government, and its successors (including City and Environment Directorate)
TfNSW	Transport for NSW (formerly Roads and Maritime Services, RMS)
TOGAS	Thin Open Graded Asphalt Surfacing
WAE	Works as Executed

1.1.5.2 Definitions

For the purposes of this Specification, the definitions given in *AS/NZS ISO 9000* and the following apply:

Authorised Person: The Authorised Person is the person or body responsible for administering the Works Contract and has the same meaning as Contract Administrator, Principal's representative, Principal's Authorised Person (PAP), Superintendent or equivalent. The powers, duties and authorities of the Authorised Person are covered in the Contract.

Certification: A written assertion of facts.

Collector Roads: Collector Roads comprise Minor Collector Roads, Major Collector Roads and any lesser category road directly connecting two such roads so as to form a continuation of the Minor or Major Collector Roads.

Contract: The agreement between the Principal and the Contractor.

Contractor: The person bound to execute the work under the Contract.

Corrective action request (CAR): A formal advice/instruction from the Authorised Person requesting action to eliminate the cause of a detected nonconformity or other undesirable situation. Unless specifically noted, it will not require raising a non-conformance report (NCR).

Disposition: Action taken to resolve non-conformance (lot specific).

Hold point: A mandatory verification position in the Contract beyond which work cannot proceed without the designated authorisation.

Inspection and Test Plan (ITP): The working document which identifies the specific inspections and tests to be carried out for works required by the Contract.

Lot: Any part of the Works which has been constructed/manufactured under a continuous operation of uniform conditions and is essentially homogeneous with respect to material and general appearance. The whole of the work included in a lot of a uniform quality without obvious changes in attribute values.

Non-conformance report (NCR): A mandatory (standard format) report submitted by the Contractor that details the nonconforming work and the Contractor's proposed disposition of the non-conformance.

Notice of non-conformance (NNC): Formal instruction from the Authorised Person regarding product non-conformance from documented requirements. It automatically creates a Hold point and requires an NCR from the Contractor.

Performance audit (process audit, technical procedure audit, methods audit): An examination to evaluate whether established methods and procedures are being adhered to in practice.

Principal: Principal has the same meaning as Owner, Client and Proprietor and is the party to whom the Contractor is legally bound to construct the Works. The primary obligation of the Principal is to make payments to the Contractor.

Product: The result of a set of interrelated or interacting activities which transform inputs into outputs.

Product audit (conformance audit, service audit): An assessment of the conformity of the product with the specified technical requirements.

Qualified surveyor: A surveyor who is eligible for membership of the Spatial Sciences Institute as a certified engineering surveyor.

Quality assurance representative (QAR): Appointed by the Principal for a specific project and responsible for the auditing, review and surveillance of procedures and documentation required by the Contractor's approved Quality Plan.

Quality checklists: Forms completed during the manufacture/construction process verifying key steps and records required for the quality register. Checklists apply to each identified lot of work.

Quality management representative (QMR): Also known as project quality representative, appointed by the Contractor for a specific project with the authority and responsibility for the implementation and operation of the Quality Plan, to ensure that quality management system (QMS) requirements are not subordinated to design and productivity.

Quality management system (QMS): The organisational structure, responsibilities, procedures, processes and resources for implementing quality management.

Quality management system (QMS) requirements: The administrative activities affecting quality that need to be implemented and controlled to make sure that the product or a service meets documented quality requirements.

Quality register: The files containing all quality control records such as test results, completed checklists, certificates of compliance and consignment dockets for materials procured.

Special processes: Those processes, the results of which cannot be directly examined to establish full conformance. Assurance of satisfactory conformance depends on evidence generated during the process.

System audit: An examination of the documented quality management system (QMS) represented by the quality manual, Quality Plan and quality register to evaluate their effectiveness in meeting the requirements of Australian Standards and the contract documents.

Validation: Confirmation, through the provision of objective evidence, that requirements for a specific intended use or application have been fulfilled.

Witness point: A nominated position in the manufacture/construction stages of the Contract where the option of attendance may be exercised by the Authorised Person, after notification of the requirement.

Works: The scope of works to be executed by the Contractor in accordance with the Contract.

1.2 Quality management system

1.2.1 General requirements

1.2.1.1 Conformance

Work on and off-site: Conform to the quality management system (QMS) described within the Quality Plan, including products and services for all works under the Contract.

Contract documents: The QMS does not pre-empt, preclude or otherwise negate the requirements of any part of the contract documents.

Responsibility: QMS requirements do not relieve the Contractor of the responsibility to conform to the contract documents.

Subcontractors and suppliers: Conform to this Specification and *AS/NZS ISO 9001*. This can be achieved by either of the following:

(a) Suppliers and Subcontractors operating their own QMS linked to and coordinated under the Contractor's QMS.

(b) Suppliers and Subcontractors operating under the Contractor's QMS.

1.2.1.2 System requirements

QMS: Plan, develop and maintain a documented QMS conforming to this Specification, **Annexure A** and *AS/NZS ISO 9001.*

System purpose: To make sure of the following:

(a) The proposed work method is consistent with the specification requirements.

(b) Inspection and Test Plans (ITPs) and checklists are adequate and complete.

(c) Approved work methods are followed.

(d) The Authorised Person adequately checks Hold points and Witness points.

Format: If the format of the QMS documents differ from the format of *AS/NZS ISO 9001*, provide a matrix outlining how the documented requirements are addressed by the QMS.

1.2.1.3 Management responsibility

Commitment: In the development of a corporate QMS in conformance with *AS/NZS ISO 9001, Section 5*, top management must perform the following:

(a) Focus on customer, statutory and regulatory requirements.

(b) Define authorities and responsibilities.

(c) Appoint a quality management representative (QMR).

(d) Establish internal communication and review procedures.

(e) Make sure resources are available.

1.2.2 Documentation requirements

1.2.2.1 General

QMS documentation requirements: Include the following:

(a) Quality policy and its objectives.

(b) Quality manual.

(c) Procedure documents.

(d) Work instructions.

(e) Forms.

(f) Quality plans.

(g) Specifications.

(h) Records.

Changes: Immediately implement changes to the project Quality Plan and QMS if the following occurs:

(i) Specification requirements are not adequately addressed.

(j) Nonconformity resulting from the Quality Plan or QMS.

(k) Audit initiates changes to the QMS.

(l) Practices have changed.

Records: Provide copies of any quality records within 14 days of request.

AS/NZS ISO 9001: Keep a copy on site at all times.

1.2.2.2 Quality manual

Requirement: To *AS/NZS ISO 9001* and *AS/NZS ISO 10013*. Include the following in the quality manual:

(a) Responsibility statements.

(b) Corporate policy.

(c) All applicable system requirement descriptions with reasons for those not regarded as applicable.

(d) Standard method statements.

(e) Standard ITPs.

1.2.2.3 Project Quality Plan

Requirement: Provide and maintain a Quality Plan to *AS/NZS ISO 9001* and *AS ISO 10005*. Provide the following:

(a) Progressive documentation of new procedures as the work types become evident.

(b) Planning and control systems: Describe critical processes and activities and provide verification for product control.

(c) Coordination with the Contractor's corporate quality manual.

(d) Project specific quality system: Inform and direct personnel about the specific quality practices, resources, sequence of activities, controls and checks that must be implemented during the Works.

(e) Contractor's survey system.

(f) Source and conformance verification of selected materials.

(g) Nominate the geotechnical consultant engaged to monitor and endorse Controlled Fill, if applicable.

(h) Controlled conditions: Documentation to explain how each work process will be carried out.

(i) Organisation structure: Include details of the specific responsibilities and authorities of the key personnel nominated for the management of the project.

(j) QMR: Include the person's qualifications, technical experience and present position, together with responsibilities and authorities to resolve quality matters.

(k) Details of the personnel or contracted testing organisations who will be conducting each type of compliance inspection of testing of completed works, their experience, qualification and responsibilities.

(l) Details of the person authorised to change construction processes on site.

(m) ITPs to verify the Works conform with the contract documents.

(n) Purchasing quality requirements:

  (i) Critical characteristics of purchased products that affect the quality of the final product.

  (ii) Method of communication with suppliers.

  (iii) Methods used to evaluate, select and control suppliers.

  (iv) The facilities and services that will be outsourced.

  (v) Material samples: The approved sample is the quality benchmark.

  (vi) Purchasing quality verification.

(o) Work Health and Safety Plan.

(p) Audit Plan.

(q) Conform to *MITS 10 Concrete for General Works* for asset and works specific Project Quality Plan requirements.

1.2.2.4 Control of documents

Document control: Conform to *AS/NZS ISO 9001, Clause 7.5.3* and *AS ISO 10005, Clause 6.6*.

Register: Maintain a register of each part of the Quality Plan. Register the number, date and recipient(s). Reissue to all registered when the Quality Plan is changed, superseded or recalled as required.

Requirement: Document within the Quality Plan the method of keeping quality registers, tracking and handling of NCRs, NNCs (notices of non-conformance) and site correspondence.

Quality register: Implement and maintain systematic records, indexed and filed so they are retrievable and accessible to the Authorised Person or an appointed quality auditor within 1 working day of request.

Register of method statements: Provide a register listing all method statements (both standard and job specific), including the title, identifier and revision status.

Location: State in the Quality Plan where records are to be located.

Works as Executed (WAE): Keep records of any amendments to design details for inclusion in WAE drawings.

Quality audit schedule: Include a quality audit schedule with the project Quality Plan in conformance with *AS/NZS ISO 19011*.

Audit reports: Provide copies to the Authorised Person as requested.

1.2.3 Resource management

1.2.3.1 General

Conformance: Conform to *AS/NZS ISO 9001, Section 7* and *AS ISO 10005, Clause 6.7*.

Provision of resources: Determine and provide resources for the successful implementation of the project Quality Plan.

Limited availability: If a resource has limited availability, identify how demand from other projects/contracts will be satisfied.

Human resources: Provide personnel with the appropriate education, training, skills and experience for the project.

Infrastructure: Identify, provide and maintain the infrastructure required to achieve product conformity.

Work environment: Establish and manage the work environment to achieve product conformity.

1.2.4 Product realisation

1.2.4.1 Planning and design

Planning: Conform to *AS/NZS ISO 9001*. Determine the following:

(a) Quality objectives and requirements for the product.

(b) Processes and documents specific to the product.

(c) Required verification, validation, monitoring, measurement, inspection, test activities and the criteria for acceptance of the product.

(d) Records required as evidence that the realisation processes and resulting products conform.

Design: Design and/or verify the following, to conform with the Specifications and *AS/NZS ISO 9001:*

(e) Temporary structures.

(f) Checking of permanent structures for construction loadings.

(g) Lifting devices for manufactured items.

(h) Alternative permanent structures or structural components proposed.

(i) Concrete mixes for structures and pavements, and asphalt mixes for permanent works.

(j) Traffic control, temporary roadways and detours.

(k) Environmental management of the site during construction.

(l) Permanent works where design is nominated in the Contract.

1.2.5 Construction and service provision

1.2.5.1 Control

Method statements: Detail the construction processes for all activities scheduled in the construction activities table.

Content: Include the following:

(a) Sequence of operations.

(b) Documented procedures and work instructions.

(c) Types of equipment required, capability, maintenance and calibration.

(d) Any special working environment requirements.

(e) Personnel competency and skills required.

(f) Criteria for workmanship and tolerances.

(g) Materials required.

(h) Safety requirements.

(i) Reference documents.

(j) Records produced.

(k) Planning.

(l) Verification measures.

(m) Inspection, test and control points.

(n) Monitoring of continuous suitability.

(o) Responsibility for implementing and monitoring work process controls and rectifying any deficiencies.

Checklist: Provide a checklist, including the relevant inspection and test points, surveying control points, Hold points, Witness points and the officer responsible to verify each check point.

System audit: Audit each method statement whilst the process is in effect.

Absence of a method statement: If a method statement for a particular activity is required and there is none submitted, this will generate a Hold point.

Table 0B-1 Construction activities

Specification	Activity
MITS 09 Landscape	Landscaping
MITS 08 Incidental Works	Installation of proprietary items
MITS 06B Concrete Paths, Driveways and Medians	Sprayed concrete
MITS 02A Clearing and Grubbing	Selective clearing and proposed equipment Work near trees Work within 4 m of trees
MITS 02B Bulk Earthworks	Excavation procedures
MITS 02C Stabilisation	Proposed curing method
MITS 10 Concrete for General Works	Precast barriers Installation
MITS 06B Concrete Paths, Driveways and Medians	Safe work

1.2.5.2 Lot identification

Lots: Divide all items of work into lots as follows:

(a) Limits: Before sampling, choose lots within the limits given in the particular Specification.

(b) Lot size: Not exceeding 1 day's output for each work process being testing.

(c) Lot numbering: Allocate unique lot numbers compatible with the construction program. Use lot numbers to be identifiers on all QMS data.

(d) Field identification: Physically identify each lot, clearly identify lot boundaries. Maintain identification until the lot has achieved the specified quality.

Work on a lot: Do not commence work until the field identification is established.

Lot boundaries: When boundaries of a lot change, update the quality register.

Lot identification system: Make sure all site records and sample numbering systems allow easy identification of all test results and the materials incorporated in the Works.

1.2.5.3 Traceability

General: Provide and maintain records of components for audit. Include the following traceability in the records:

(a) Concrete: Start the trace at the batch plant and finish at the location where the concrete is incorporated in the Works.

(b) Asphalt: Start the trace at the batch plant and finish at the location where the asphalt is incorporated in the Works.

(c) Stabilised material: Start trace at the batch plant and finish at the location where the material is incorporated in the Works.

(d) Steel: Start the trace at the steelworks and finish at the location where the steel is incorporated in the Works. Record the steel heat number, testing details and final location of installation.

(e) Batch details: Record all batch quantities, mix and dispatch time, testing details and location of placement.

1.2.5.4 Control of monitoring and measuring equipment

Equipment accuracy: Maintain inspection, testing and measuring equipment capable of producing the degree of accuracy specified in the referenced test methods.

Records: Demonstrate accuracy with regular records of calibration.

1.2.6 Measurement and analysis

1.2.6.1 General

Testing: Unless otherwise specified, all testing is to be undertaken in a Principal approved laboratory or equivalent scheme for the appropriate tests and performed in accordance with procedures contained in the relevant Australian Standard, or State Road Authority or Austroads test method. Where practicable, conduct testing by a National Association of Testing Authorities (NATA) registered laboratory accredited for those test methods and sampling procedures. Include the latest NATA advice of the terms of registration and current signatories in the Quality Plan.

Sampling: Conduct by personnel from the NATA registered laboratory which has been accredited for that sampling procedure and supervised by the approved signatory from that laboratory.

Test results: Report on NATA endorsed test documentation which includes a statement by the approved signatory certifying that the correct sampling procedures have been followed.

Reinstatement: Reinstate all core holes, test holes, excavations and any other disturbance resulting from any testing activity to the standard within the Specification.

Lots: All conformance inspections and tests are based on lots. In all cases the samples are considered representative of the lot and all test results are required to meet the appropriate tolerances for the lot.

Sampling locations: Except where **Clause 1.2.6.5** applies, propose sampling locations for approval prior to proceeding.

In-process and conformance inspections: Required for all works to confirm conformance. Performed by a responsible officer nominated in the checklist and certified by the Contractor’s QMR

1.2.6.2 Frequency of testing

Minimum frequency of testing: Must be not less than that stated in the relevant Specification and as listed within the sub-annexures of **Annexure C**.

Reduced frequency of testing: Submit proposal for approval with supporting statistical analysis verifying consistent conformance to the quality requirements. Statistical techniques in accordance with *TfNSW Specification Q6* will be accepted within the ACT.

1.2.6.3 Inspection and Test Plans

Document: Include within the Quality Plan all inspections, tests and documentation necessary to demonstrate that the Works conform.

ITP: Establish and progressively maintain a system to demonstrate inspection and testing in conformance with *AS/NZS ISO 9001*.

Minimum information for ITP (or ITP forms): Include the following:

(a) Person responsible for carrying out in-progress and final inspections or testing and at what stage of works these are to be carried out.

(b) Proposed inspection or test methods and recording of results.

(c) Acceptance criteria and frequency of inspection and testing.

(d) Specification tolerances.

(e) Person responsible for reviewing inspection and test results, evaluating whether work conforms, determining future action when work does not conform and closing out work lots.

(f) Measures to control nonconformity.

(g) When statistical analysis of test results is required.

(h) Person responsible for performing the final review of results to confirm that all inspections and tests have been carried out to verify complete conformity for each lot.

(i) Time limits for testing, submission, Hold points and Witness points that are nominated in the specifications.

(j) Identification of Hold points or Witness points.

(k) Checklist for each lot.

1.2.6.4 Test register

Lot identification register: Include the following information:

(a) Three-dimensional surveyed location of the lot to include the chainage of the start and finish points, lateral location, and layer location and/or the particular structure (e.g. pier or abutment number, concrete placement number, etc.).

(b) Indication of conformance or non-conformance.

(c) Summary of test results.

(d) Location of test sites, including test identification numbers.

(e) For nonconforming lots, allocate a new number to the resubmitted/subdivided lot(s), ensure it also references the original lot number.

Inspection and test status: Show either on the ITP records or physically mark in the field the status of conformance for each lot.

1.2.6.5 Random sampling

Requirement: Use random sampling techniques for each lot for sampling of in situ material and for the control of compaction of each continuous layer of earthworks, flexible pavement and asphalt.

Test locations: Determine test locations for random sampling in conformance with *AS 1289.1.4.1.*

Location restrictions: Do not restrict sampling to locations dimensioned or otherwise defined for setting out the Works in the drawings or specification.

1.2.7 Monitoring and measurement

1.2.7.1 Hold points

Notice of inspection: Notify the Authorised Person in advance of a Hold point being reached.

Requirements for approval to proceed: In conformance with the following:

(a) Provide the information required by the Specification.

(b) Certify that the particular lot/process is conforming.

(c) Certify that all underlying and adjacent lots affected by the lot in question are conforming.

(d) Submit the appropriate form (checklist, NCR or NNC) at least 24 hours prior to the time the Contractor wishes to proceed with the placement/construction of the next lot, unless some alternative arrangements have been agreed with the Authorised Person.

Witness point: If the Hold point has resulted from an NCR or NNC, the Authorised Person's approval may be conditional on a Witness point being included.

1.2.7.2 Audit testing

Surveillance and audits: The Authorised Person may elect to undertake audit testing of the Works in addition to the Contractor's testing requirements under the Contract. All audit testing by the Principal will be conducted by a laboratory with NATA accreditation for the test methods specified.

1.2.8 Surveying control

1.2.8.1 Requirements

Survey control: A separate system requirement to include all measurement, calculation and recording procedures necessary to:

(a) set out the Works

(b) verify conformance with the drawings and specification in relation to dimensions, tolerances and three-dimensional position

(c) determine lengths, areas or volumes of materials or products, where required for measurement of work.

Method statement: Describe the control parameters for special processes which cannot be fully verified by inspection and testing. Address all potential errors that could be introduced by survey methods.

Surveyor qualifications: Appoint qualified surveyors to supervise and take responsibility for all surveying control.

Equipment: The procedures and equipment used must be capable of attaining the tolerances nominated in the specification.

Survey locations: Surveying for conformance verification purposes is not restricted to the locations used to set out the Works.

Conformance verification surveys: Perform verification surveys as soon as practicable, but not later than 1 working day after the lot or component has become accessible for survey.

1.2.8.2 Control of documentation

Survey conformance report: Submit a survey conformance report for each lot or component where design levels, position and/or tolerances have been specified. Refer to the relevant clause of the Specification to establish if a Hold point is generated before further works can commence.

Information required: Indicate the difference between actual and specified values for position and level (defined by coordinates or chainage and offset), and provide certification by the qualified surveyor responsible for the verification survey.

Survey records: Provide all survey records, including equipment calibration records and nonconformity registers.

Field book pages: Include clear labels, date and signature by the surveyor, cross indexed references to equipment used and lot/component identification. Survey conformance reports produced must reference the relevant field book page numbers.

Retain: Retain any automatically recorded data used for verification surveys, including a printout of both raw (field) data and reduced data.

Audit trail: Prepare procedures to describe the records system, to include the method of storing and indexing of electronic records and the title of any computer software used for the reduction of survey measurements and calculations.

1.2.9 Control of nonconforming works

1.2.9.1 General

Detection and reporting: Report any works that depart from the documented requirements on an NCR form within two working days of detection, including the proposed disposition. A sample NCR form is included in **Annexure B**.

Extension of time: The deliberation on disposition of a non-conformance does not justify an extension of time to the contract period under any circumstances.

Proposed disposition: Include any of the following actions:

(a) Proposed additional works to bring the lot up to the specified standard.

(b) Proposed replacement of all or part of the lot to bring it up to the specified standard.

(c) A request to use the lot for a reduced level of service, if such a clause exists in the relevant clause of the Specification.

(d) For incidental defects, a request that the Authorised Person accept the lot without alteration, as an exception with or without alteration to the respective unit rates.

1.2.9.2 Monitoring and measuring

NCR: Generates an automatic Hold point until conformance has been achieved and the Authorised Person has signed authorisation to proceed.

Progress: Do not cover any nonconforming works until a disposition has been accepted/approved and implemented.

Reworking: If the non-conformance can be overcome by reworking the lot with the original process, an NCR will not be required. However, maintain a record of the non-conformance to aid continual improvement.

Verification: Reworked/replaced lots to conform to the specified requirements.

Discrepancy: The Authorised Person's test results will prevail where there is any discrepancy in test results.

1.2.9.3 Control of documentation

CAR (corrective action request): Issued by the Authorised Person for non-conformance to the Contractor's quality system or methods. Unless specifically stated, this will not create a Hold point.

NNC: Issued by the Authorised Person for product non-conformance. This will immediately create a Hold point and the Contractor is required to submit an NCR.

NCR form: Example form provided in **Annexure B**. If using an alternative form, it must include the following:

(a) Details of non-conformance.

(b) Proposed disposition.

(c) Provision for attachments.

(d) Quality assurance representative (QAR) comment/approval/rejection.

(e) Completion of disposition.

(f) Release of Hold point.

(g) Corrective action to improve quality.

(h) Close out of NCR.

Authorised representative: All actions are to be signed off by authorised representatives of the Contractor and Authorised Person as applicable (i.e. QAR and QMR).

Register: Implement and maintain a suitable numbering and registration system for all NCRs and NNCs, including cross referencing as required.

1.2.9.4 Corrective action

Requirement: Document procedure for corrective action to Quality Plan in conformance with *AS/NZS ISO 9001, Clause 10.2.*

Proposed corrective action: Indicate on the NCR form the corrective action appropriate to ensure that the Quality Plan is effective in avoiding a recurrence of the non-conformance and continues to be effective.

1.3 Completion

1.3.1 Works as Executed (WAE) Records

1.3.1.1 Finalisation

General: The Contractor shall prepare WAE information, test result summaries and asset lists in the format specified by the relevant asset owner, including:

(a) Transport Canberra and City Services – *Reference Document 8 – Requirements for Works as Executed Records*.

(b) Icon Water – Water Supply and Sewerage Standards.

(c) Evoenergy – Works as Executed Submissions.

(d) NBN Co – As-Built Handover Requirements.

WAE Records shall show the 'as constructed/installed' construction elements, plant, equipment and the like as required. The Contractor shall modify the drawings to indicate any variation from the original contract drawings to the 'as constructed' condition. The information shown shall include any variation to the contract drawings by coordinate or chainage and off-set of all constructed works, including invert levels of pipes, ducts and conduits at all structures and terminations.

Digital drawings: Digital contract drawings shall be supplied by the Authorised Person at no cost.

Certification: The WAE information shall be certified by the Contractor's surveyor or engineer and approved by the Authorised Person.

1.3.1.2 Maintenance

Documents: Provide copies of all:

(a) commissioning records

(b) operation manuals

(c) maintenance manuals

(d) product warranties.

2 Measurement and payment

2.1 Measurement

2.1.1 General

Payments made to the Bill of Quantities: To this Specification, the drawings and **Clause 2.2**.

2.1.2 Methodology

The following methodology will be applied for measurement and payment:

(a) Quality verification and control: Allow for all testing and quality assurance requirements to verify that all aspects of the Works conform to the quality assurance provisions of the Contract within each Pay item and not within this Specification.

(b) Progress payments for quality system documents and records are calculated on the basis of 30% of the lump sum when the complete Quality Plan is available and the remainder on a pro rata basis, based on the monthly value of work done.

(c) Payment for WAE quality items shall be upon completion and approval of the WAE quality records by the authorities.

2.2 Pay items

Table 0B-2 Pay items

Item No	Pay items	Unit of measurement	Schedule of rates scope
0B.1	Quality system documents and records	Lump sum	All costs associated with the preparation and submission of the Quality Plan, the provision of the QMR on site and the maintenance of the quality records during the course of the Contract. This Pay item shall include all costs associated with the provision of construction records, including Works as Executed (WAE) documents, asset registers and maintenance manuals required at the completion of the Works.
0B.2	Quality verification and control – Additional testing	Provisional Sum	All costs for third-party inspections, conformance surveys and testing where directed by the Authorised Person in addition to the quality assurance provisions of the Contract.
0B.3	Preparation of Works as Executed (WAE) drawings	Provisional sum	This Pay item shall include all drafting services by the consultant(s) engaged by the Contractor. A separate sub-pay item shall be included for each consultant. For example: 0B.4.1.1 Civil 0B.4.1.2 Landscape 0B.4.1.3 Streetlight 0B.4.1.4 NBN

Annexure A – Project quality management system documentation flow chart

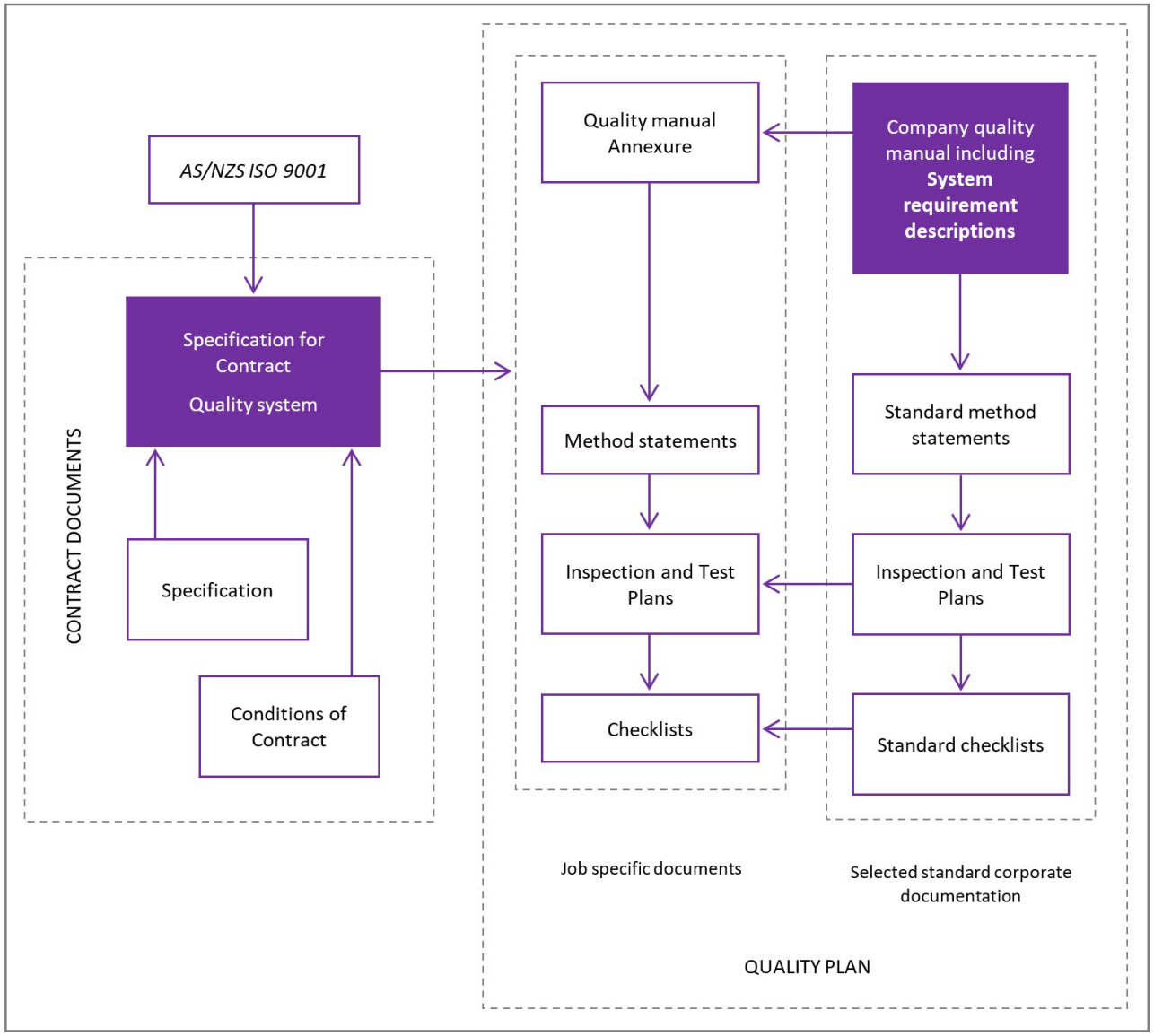


Figure 0B-1 Project QMS (quality management system) documentation flowchart

Annexure B – Sample non-conformance report

Non-conformance report (NCR) **NCR number:** _____

Date: _____

Contract: _____

Product or service: _____

Subcontractor (if appropriate): _____

Inspection and Test Plan (ITP) number: _____

Lot number and description/location: _____

_____

_____

_____

Details of non-conformance: _____

_____

_____

_____

Proposed disposition: _____

_____

_____

_____

Supplementary report attached: Yes ☐ No ☐

Principal: Approved ☐ Rejected ☐

Comment: _____

_____

_____

_____

Principal signature: _____ Date: _____

Disposition completed
(Contractor): _____ Date: _____

Release of Hold point
(Authorised Person): _____ Date: _____

Close out of NCR
(Contractor's QMR): _____ Date: _____

Annexure C – Maximum lot sizes and minimum test frequencies

General

Lot sizes and test frequency: To the following Sub-annexures.

Contract requirements summary: To **Table 0B-3**.

Certification: If material/product quality certification can be obtained from the supplier, documented tests need not be repeated.

Large projects: The Authorised Person may relax the testing frequency after the Contractor has demonstrated consistent conformance to the quality requirements, as described in **Clause 1.2.6**.

Table 0B-3 Contract requirements summary

Sub-annexure	Reference Specification
C1 Bulk earthworks	MITS 02B Bulk Earthworks
C2 Stormwater	MITS 06A Concrete Kerbs and Open Drains MITS 03A Trenching for Underground Services MITS 03B Pipe Drainage MITS 03C Precast Box Culverts MITS 03D Drainage Structures MITS 03H Road Openings and Restoration
C3 Pavement moisture control	MITS 03I Subsurface Drainage MITS 03J Subsoil and Foundation Drains MITS 03K Drainage Mats
C4 Stabilisation	MITS 02C Stabilisation
C5 Flexible pavements	MITS 04 Flexible Pavements
C6 Segmental paving	MITS 07 Segmental Paving
C7 Pavement markings	MITS 11 Pavement Marking
C8 Signposting	MITS 14 Road Signs
C9 Concrete kerbs, open drains and paving works	MITS 06A Concrete Kerbs and Open Drains MITS 06B Concrete Paths, Driveways and Medians
C10 Landscape and incidental works	MITS 08B Play Equipment and Organic Surfacing MITS 08C Rubber Impact Attenuating Surface MITS 08D Furniture and Fixtures MITS 09A Topsoil MITS 09B Grassing MITS 09C Planting
C11 Pathways and cycleways	MITS 06B Concrete Paths, Driveways and Medians
C12 WSUD features	MITS 09E Water Quality Vegetation Establishment
C13 Concrete for general works	MITS 10 Concrete for General Works

Water supply and sewerage: To Icon Water's *Water Supply and Sewerage Standards* and *Standard Drawings*.

Sub-annexure C1 – Bulk Earthworks

Table 0B-4 MITS 02B

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Stripping topsoil	Surface levels	10,000 m^2	1 cross section per 25 m	Survey
Excavation	Geometry	10,000 m^2	1 cross section per 25 m	Survey
Floor of cuttings	Material quality: - CBR	5,000 m^2	1 per 1,000 m^2* but not less than 3 tests per lot	*AS 1289.6.1.1*
	Compaction	10,000 m^2	1 per 500 m^2	*AS 1289.5.4.1* or *AS 1289.5.7.1*
Blasting	Ground vibration/noise control	1 day's blasting	Continuous monitoring	
Foundation for embankments	Compaction	5,000 m^2	1 per 500 m^2	*AS 1289.5.4.1* or *AS 1289.5.7.1*
Embankments – General (General Fill and Controlled Fill)	Geometry	1 layer 10,000 m^2	1 cross section per 25 m	Survey
	Material quality: - CBR	1 layer 5,000 m^2	1 per 800 m^3	*AS 1289.6.1.1*
	Compaction/moisture content	1 layer 5,000 m^2	1 per 250 m^3	*AS 1289.5.1.1* *AS 1289.5.4.1* *AS 1289.5.7.1*
Selected Material Zone (imported or site won)	Geometry	1 layer 10,000 m^2	1 cross section per 25 m	Survey
	Material quality (CBR8 and CBR10 Select Material): - Liquid Limit - Passing 0.075 mm sieve - Plasticity Index - 4 day Soaked CBR (100% ±1% Standard Compaction)	 10,000 m^2 10,000 m^2 10,000 m^2 10,000 m^2	 1 per 275 m^3 1 per 275 m^3 1 per 275 m^3 1 per 275 m^3	 *AS 1289.3.1.1* *AS 1289.3.6.1* *AS 1289.3.3.1* *AS 1289.6.1.1*

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
	Material quality (Site won CBR15 and CBR30 Select Material):			
	- Passing 19 mm sieve	10,000 m^2	1 per 275 m^3	*AS 1289.3.6.1* or *TfNSW T106*
	- Passing 2.36 mm sieve	10,000 m^2	1 per 275 m^3	*AS 1289.3.6.1* or *TfNSW T106*
	- Plasticity Index	10,000 m^2	1 per 275 m^3	*AS 1289.3.3.1* or *TfNSW T109*
	- 4 day Soaked CBR (100% ±1% Standard Compaction)	10,000 m^2	1 per 275 m^3	*AS 1289.6.1.1* or *TfNSW T117*
	Material quality (imported CBR15 and CBR30 Select Material)	To *TfNSW Specification 3071*		
	Compaction/moisture content	1 layer 5,000 m^2	1 per 500 m^2 or 3 tests, whichever is greater	*AS 1289.5.1.1* *AS 1289.5.4.1* *AS 1289.5.7.1*
Selected Material Zone (natural in situ material, including natural in situ rock material)	Geometry	1 layer 10,000 m^2	1 cross section per 25 m	Survey
	Material quality:	1 layer		
	- Liquid Limit	10,000 m^2	1 per 400 m^2**	*AS 1289.3.1.1*
	- Passing 0.075 mm sieve	10,000 m^2	1 per 400 m^2**	*AS 1289.3.6.1*
	- Plasticity Index	10,000 m^2	1 per 400 m^2**	*AS 1289.3.3.1*
	- 4 day Soaked CBR (100% ±1% Standard Compaction)	10,000 m^2	1 per 400 m^2** ** but not less than 3 tests per lot	*AS 1289.6.1.1*
	Compaction/moisture content	1 layer 5,000 m^2	1 per 500 m^2 or 3 tests, whichever is greater	*AS 1289.5.1.1* *AS 1289.5.4.1* *AS 1289.5.7.1*
Fill adjacent to bridges, wingwalls, retaining walls and culverts	Material quality:			
	- Particle size distribution	1 structure	1 per 200 m^3 *	*AS 1289.3.3.1*
	- Plasticity Index	1 structure	1 per 200 m^3 *	
	Compaction/moisture content	1 structure	1 per layer	*AS 1289.5.1.1* *AS 1289.5.4.1* *AS 1289.5.7.1*

* or part thereof, per lot

Sub-annexure C2 – Stormwater

Table 0B-5 MITS 03A, MITS 03B, MITS 03C, MITS 03D, MITS 03H, MITS 06A

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Supply of precast units	Precast quality: Supplier's documentary evidence and certification	1 batch	1 per type/size/ class per batch	
Siting and excavation	Geometry	1 drainage line/structure	1 per drainage line/structure	Survey
Excavation by blasting	Peak particle velocity	1 drainage line/structure	1 per drainage line/structure	Measure
Foundation	Compaction	1 drainage line/structure	1 per 20 lin m*	*AS 1289.5.4.1*
Material surrounding steel structures	Material quality: - pH/electrical resistivity	 1 drainage line/structure	 1 per material	 *AS 1289.4.3.1* *AS 1289.4.4.1*
Bedding	Material quality: - Particle size distribution	 1 contract	 1 per 200 m^3 *	 *AS 1141.11.1*
	Compaction/moisture content	1 drainage line/structure	1 per layer, per 20 lin m	*AS 1289.5.4.1* *AS 1289.5.7.1*
Concrete bedding or lining	Geometry		1 cross section per 25 m	Survey and 3 m straight edge
Installation of precast units	Geometry	1 drainage line/structure	1 per drainage line/structure	Survey
Selected backfill	Material quality: - Maximum particle size - Plasticity Index	 1 contract 1 contract	 1 per 100 m^3 * 1 per 100 m^3 *	 *AS 1289.3.3.1* *AS 1289.5.4.1*
	Compaction/moisture content	1 drainage line/structure	1 per 2 layers per 50 m^2	*AS 1289.5.7.1*
Backfill under paths and driveways	Material quality: - Maximum particle size	 1 contract	 1 per 150 m^3 *	 *AS 1289.3.3.1*
	Compaction/moisture content	1 drainage line/structure	1 per 2 layers per 30 m	*AS 1289.5.4.1* *AS 1289.5.7.1*
Rock fill for gabions/wire mattresses	Material quality: - Wet strength - Wet/dry strength variation	 1 contract 1 contract	 1 per contract 1 per contract	 *AS 1141.22* *AS 1141.22*
Kerb and gutter	Geometry	1 contract	1 cross section per 25 m	Survey and 3 m straight edge

* or part thereof, per lot

Sub-annexure C3 – Pavement moisture control

Table 0B-6 MITS 03I, MITS 03J, MITS 03K

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Material supply	Material quality – Supplier's documentary evidence and certification of:			
	Pipe	1 contract/size	1 per type/size	
	Type TfNSW filter material:			
	- Coefficient of uniformity	1 contract/size	1 per 100 m^3	*TfNSW T201*
	- Percentage of material retained on 75 µm sieve	1 contract/size	1 per 100 m^3	*TfNSW T203*
	- Wet/dry strength variation and wet strength	1 contract/size	1 per 100 m^3	*TfNSW T215*
	Type TfNSW R44 drainage layer material:			
	- Maximum particle dimension	1 contract/size	1 per 100 m^3	Inspection, *TfNSW T280* if required
	- Grading	1 contract/size	1 per 100 m^3	*TfNSW T201*
	- Point Load Strength Index of +19 mm fraction	1 contract/size	Min 10 per stockpile	*TfNSW T223*
	- Wet/dry strength variation	1 contract/size	Stockpile	*TfNSW T215*
	Filter material (Type C, D and E:			
	- Grading (Type C, D, E)	1 contract/size	1 per type	*AS 1141.11.1*
	- Wet strength (Type C, D)	1 contract/size	1 per type	*AS 1141.22*
	- 10% fines wet/dry (Type C, D)	1 contract/size	1 per type	*AS 1141.22*
	Geotextile	1 contract	1 per type	
Excavation – Trench base	Line and grade	1 drainage line	1 per 200 lin m	Survey
	Compaction	1 drainage line	1 per 200 lin m*	*AS 1289.5.4.1*
Bedding and backfill:				
Filter material	Compaction	1 drainage line	1 per drainage line	*AS 1289.5.6.1*
Selected backfill	Compaction	1 drainage line	1 per 200 lin m*	*AS 1289.5.4.1*
Earth backfill	Compaction	1 drainage line	1 per 200 lin m*	*AS 1289.5.4.1*
Drainage mat	Geometry	2,000 m^2	1 cross section per 25 m	Survey

* or part thereof, per lot

Sub-annexure C4 – Stabilisation

Table 0B-7 MITS 02C

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Material supply	Material quality – Supplier's documentary evidence and certification of:			
	- Cement	1 contract	1 per 100 t	*AS 3972* and *AS 2350 (various)*
	- Quicklime			
	Available lime (CaO content)	1 contract	1 per 100 t	*AS 3583.12*
	Slaking rate	1 contract	1 per 100 t	*TfNSW T432*
	Particle size distribution	1 contract	1 per contract	*AS 1141.11.1*
	- Hydrated lime			
	Available lime ($Ca(OH)_2$)	1 contract	1 per 100 t	*AS 3583.12*
	Residue on sieving	1 contract	1 per contract	*AS 3583.14*
	Ground blast furnace slag	1 contract	1 per month	*AS 3583.2* and *AS 3582.2*
	- Fly ash	1 contract	1 per month	*AS 3583.1* and *AS/NZS 3582.1*
	- Blended stabilising agent	1 contract	1 per month	*AS/NZS 2350.4*
	- Water			
	Chloride ion content	1 contract	1 per contract	*AS 3583.13*
	Sulphate ion content	1 contract	1 per contract	*AS 1289.4.2.1*
	Undissolved solids	1 contract	1 per contract	
Mix design	NATA certification – Supplier's documentary evidence and certification	1 mix	1 per mix	
Stationary mixing plant	Application rate of stabilising agent	1 day's production	1 per 100 t	
	Compressive strength of product	1 day's production	1 per 100 t	*AS 1289.6.1.1*
In situ spreading	Spread rate	1 layer, 1,000 m^2	1 per lot or 1 per 500 m^2	
	Mix uniformity	1 layer, 1,000 m^2	1 per 500 m^2	Visual
Trimming and compaction	Geometry	1 layer, 2,000 m^2 max 1 day's placement	1 cross section per 25 m	Survey
	Surface quality	1 layer, 2,000 m^2 max 1 day's placement	10 per 200 m lane length*	3 m straight edge
	Average layer thickness	1 layer, 2,000 m^2 max 1 day's placement	1 per lot	Survey
	Average width	1 layer, 2,000 m^2 max 1 day's placement	1 per lot	Measure/survey
	Relative compaction/moisture content	1 layer, 2,000 m^2 max 1 day's placement	3 per lot	*AS 1289.5.7.1* *AS 1289.5.8.1*

* or part thereof, per lot

Sub-annexure C5 – Flexible pavements

Table 0B-8 MITS 04

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Base and subbase supply	Material quality – Supplier's documentary evidence and certification	1 contract		
	- Particle size distribution		1 per 1,000 t	*AS 1289.3.6.1*
	- Liquid Limit		1 per 1,000 t	*AS 1289.3.1.1*
	- Plasticity Index		1 per 1,000 t	*AS 1289.3.3.1*
	- Linear Shrinkage		1 per 1,000 t	*AS 1289.3.4.1*
	- Maximum dry compressive strength		1 per 5,000 t	*AS 1141.52*
	- Particle shape		1 per 1,000 t	*AS 1141.14*
	- Aggregate wet strength		1 per 5,000 t	*AS 1141.22*
	- Wet/dry strength variation		1 per 5,000 t	*AS 1141.22*
	- Los Angeles value		1 per 1,000 t	*AS 1141.23*
	- CBR		1 per 5,000 t	*AS 1289.6.1.1*
	- Modified Texas Triaxial classification		1 per contract	*TfNSW T171*
	- Unconfined Compressive Strength		1 per 5,000 t	*AS 5101.4*
	- Total sulphur content		1 per 5,000 t	*AS 1141.36*
	- Water soluble sulphate content		1 per 5,000 t	*AS 1289.4.2.1*
	- Undesirable materials (applies to constituent recycled materials only)		1 per 1,000 t or as per *TfNSW 3051, Table 3051/L.1*	*TfNSW T276*
	- Asbestos (applies to constituent recycled building materials only)		1 per 1,000 t	*AS 4964*

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Placement	Geometry: Alignment and level - Width and surface trim	1 layer 2,000 m^2 or max 1 day's placement	1 cross section per 15 m, 10 per selected 200 lin m	Survey Measure and 3 m straight edge
	Compaction/moisture content/dry density testing	1 layer 5,000 m^2 or max 1 days placement	1 per 500 m^2 layer or 3 tests, whichever is greater	*TfNSW T120* *TfNSW T121* *TfNSW T180* *AS 1289.2.1.1* *TfNSW T119* *TfNSW T173* *AS 1289.5.3.2* *AS 1289.5.8.1* *TfNSW T111* *TfNSW T112* *TfNSW T162* *AS 1289.5.1.1* *AS 1289.5.2.1* *AS 1289.5.7.1*
	Moisture content testing after dry back (only for base)	As for compaction lot	Test at same frequency as for compaction testing and close to density test locations	As for compaction and moisture content testing
Testing for modified materials	To *TfNSW Specification R71* This includes all testing required by all TfNSW specifications which are referenced within *TfNSW Specification R71* (e.g. *TfNSW Specification 3051*, *TfNSW Specification 3211*, etc.)			
Testing for bound materials	Plant mixed heavily bound pavement course: (i) Cementitious stabilisation binders: To *TfNSW Specification R73* (ii) Lime stabilisation binders: To *TfNSW Specification R73* In situ pavement stabilisation using slow setting binders: (iii) Cementitious stabilisation binders: To *TfNSW Specification R75* (iv) Lime stabilisation binders: To *TfNSW Specification R75* Foam bitumen stabilisation: *To TfNSW Specification R76* This includes all testing required by all TfNSW specifications which are referenced within the above listed TfNSW specification documents (e.g. *TfNSW Specification 3051*, *TfNSW Specification 3211*, etc.)			

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Testing for asphalt	Light duty dense graded asphalt: To *TfNSW Specification R117* Stone mastic asphalt: To *TfNSW Specification R121* Thin Open Graded Asphalt Surfacing (TOGAS): To *TfNSW Specification R123* Heavy duty dense graded asphalt: To *TfNSW Specification R116* Open graded asphalt: To *TfNSW Specification R119* High modulus asphalt (EME2): To *TfNSW Specification R126* Crumb Rubber Asphalt: To *Specification R118*, *TfNSW Specification 3256* and *TfNSW Specification 3256* Recycled crushed glass: *TfNSW Specification 3154* Recycled plastics: Refer *MITS 04 Flexible Pavements, Clause 3.1.33*. Coloured surface coatings for bus lanes and cycle ways: To *TfNSW Specification R110* This includes all testing required by all TfNSW specifications which are referenced within the above listed TfNSW specification documents (e.g. *TfNSW Specification 3152*, *TfNSW Specification 3153*, *TfNSW Specification 3253*, etc.)			
Testing for sprayed bituminous surfacing	Sprayed bituminous surfacing (with cutback bitumen): To *TfNSW Specification R106* Sprayed bituminous surfacing (with polymer modified bitumen): To *TfNSW Specification R107* Microsurfacing: To *TfNSW Specification ATS-3450* Sprayed bituminous surfacing (with emulsified bitumen): To *TfNSW Specification R111* Cover aggregate for bituminous surfacing: To *TfNSW Specification 3151* Crumb rubber: To *TfNSW Specification 3252* and *TfNSW Specification 3256* This includes all testing required by all TfNSW specifications which are referenced within the above listed TfNSW specification documents (e.g. *TfNSW Specification 3253*, etc.)			

Sub-annexure C6 – Segmental paving

Table 0B-9 MITS 07

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Materials supply	Material quality – Supplier's documentary evidence and certification of:			
	- Concrete segmental paving units	1 contract	1 per contract	
	- Clay segmental paving units	1 contract	1 per contract	
	- Bedding sand Grading	1 contract	1 per contract or change in material	*AS 1141.11.1*
	- Joint filling sand Grading	1 contract	1 per contract or change in material	*AS 1141.11.1*
Base	Geometry	1 layer, 5,000 m^2 max 1 day's placement	1 cross section per 25 m	Survey
	Surface quality	1 layer, 5,000 m^2 max 1 day's placement	10 per 200 m^2 or lot	3 m straight edge
Edge restraints	Refer **Sub-annexure C9**	1 day's placement	1 per 10 lin m	Measure/survey
Laying paver units	Joint width	1 day's placement	All joints	Measure
	Geometry	1 day's placement	1 cross section per 15 m	Survey
	Surface quality	1 day's placement	10 per 200 m^2 or lot	3 m straight edge

Sub-annexure C7 – Pavement markings

Table 0B-10 MITS 11

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Surface friction	Surface friction (measured by a laboratory (in BPNs) registered for skid resistance testing with NATA)	1 contract	Provisional sum – to be specified by the Authorised Person	*TfNSW T231*
Reflectivity	Reflectivity values (millicandelas per lux per square metre (mcd/lux/m^2))	1 contract	5 per 200 lin m, including side roads	Measure by an MX30 retroreflectometer or approved equivalent
Coloured surface coatings	Binder thickness	1 contract	1 contract	Measure by micrometer
	Surface texture	1 contract	1 contract	*TfNSW T240* *TfNSW T192*
	Surface friction	1 contract	Provisional sum – to be specified by the Authorised Person	*TfNSW T231*

Sub-annexure C8 – Signposting

Table 0B-11 MITS 14

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Materials supply	Material quality – Supplier's documentary evidence and certification of:			
	- Sign blanks	1 contract	1 per contract, or change in material	*AS 1743*
	- Aluminium extrusion backing	1 contract	1 per contract, or change in material	*AS/NZS 1866*
	- Retroreflective material	1 contract	1 per contract, or change in material	*AS 1743*
	- Non-reflective paint	1 contract	1 per contract, or change in material	*AS/NZS 2311*
	- Non-reflective sheet material	1 per contract, or change in material		
	- Steel sign support structures		1 per contract, or change in material	
	- Grade	1 contract	1 per contract, or change in material	*AS 1627.9*
	- Protective treatment	1 contract	1 per contract, or change in material	*AS/NZS 4680* and *AS/NZS 1214*
Concrete foundations	Refer **Sub-annexure C13**			

Sub-annexure C9 – Concrete kerbs, open drains and paving works

Table 0B-12 MITS 06A, MITS 06B

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Subgrade	Compaction	1,000 lin m or 1,000 m^2	1 per 200 lin m or 200 m^2	*AS 1289.5.4.1* *AS 1289.5.7.1*
	Geometry: Surface finish level	10,000 m^2	1 cross section per 25 lin m and each driveway centreline	Survey
Subbase / base placement	Compaction	1 day's placement	1 per 100 lin m or 100 m^2	*AS 1289.5.4.1* *AS 1289.5.7.1*
	Geometry: Surface finish level and thickness	1 day's placement	1 cross section per 25 lin m and each driveway centreline	Survey and 3 m straight edge
Concrete supply	Refer **Sub-annexure C13**			
Concrete placement geometry	Geometry: Surface finish level and thickness	15 m^3	1 cross section per 15 lin m and edges of driveways	Survey and 3 m straight edge
	Geometry: Surface dimensions	Single fabrication	As required to confirm design dimensions	Measure
Backfilling	Material quality: - Maximum particle size - Plasticity Index	 1 contract/ material type 1 contract/ material type	 1 per 200 m^3 or lot 1 per 200 m^3 or lot	 *AS 1289.3.3.1*
	Compaction	1 day's work or max 200 m^2	1 per 200 m^2 or lot	*AS 1289.5.4.1* *AS 1289.5.7.1*
Sprayed concrete	Refer **Sub-annexure C13**			

Sub-annexure C10 – Landscape and incidental works

Table 0B-13 MITS 08B, MITS 08C, MITS 08D

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Decomposed granite gravel	Material quality – sample	1 per contract	1 per contract	
	Subgrade	1,000 lin m or 1,000 m^2	1 per 200 lin m or 200 m^2	*AS 1289.5.4.1*
	Base	1,000 lin m or 1,000 m^2	1 per 200 lin m or 200 m^2	*AS 1289.5.4.1*
	Geometry	1 day's placement	1 per 25 lin m	
Shade sail	Material quality – sample	1 per item	1 per contract	
	Quality of finish – sample	1 per item	1 per contract	
Playground equipment	Submission of documents prior to ordering	1 per item	1 per contract	
Playground compliance inspection and audit	Certification that playground is compliant with *AS 4685 (Set)*	1 per item	1 per contract	*AS 4685 (Set)*
Organic softfall	Material quality – sample	1 per contract	1 per contract	*AS 4422*
	Certification that impact attenuation is compliant with *AS 4685 (Set)*	As per *AS 4422*	As per *AS 4422*	*AS 4422*
Rubber softfall	Submission of documents verifying installers experience	1 per contract	1 per contract	
	Material quality – sample	1 per contract	1 per contract	
	Subgrade	500 m^2	1 per 250 m^2	*AS 1289.5.4.1*
	Subbase	500 m^2	1 per 250 m^2	*AS 1289.5.4.1*
	Certification that impact attenuation is compliant with *AS 4685 (Set)*	As per *AS 4422*	As per *AS 4422*	*AS 4422*

Table 0B-14 MITS 09A, MITS 09B, MITS 09C

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Seed	Certification of authenticity for the prescribed mix	1 contract	Certification for each production batch delivered	
Turf supply source	Certification that turf is free from Madagascan Fireweed	1 per contract	1 per contract	*AS 1289*
Soil Type 1 Soil Type 2	pH and electrical conductivity Saturated hydraulic conductivity Cation exchange capacity Available phosphorous and nitrogen	1,000 m^3	1 per 1,000 m^3	*AS 1289*
Soil Type 3 Soil Type 4	pH and electrical conductivity Cation exchange capacity Available phosphorous, nitrogen and manganese Texture Organic matter content	500 m^3	1 per 500 m^3	*AS 1289*
Soil Type 5	Filler soil: - pH and electrical conductivity - Cation exchange - Available phosphorous, nitrogen and manganese - Texture - Organic matter content Aggregates: - Particle size distribution - Sodium sulphate soundness - Aggregate to filler soil ratio	1,000 m^3	1 per 1,000 m^3	*AS 1289*
Soil Type 6	Texture - Hydraulic conductivity - pH and electrical conductivity - Cation exchange capacity - Available phosphorous and nitrogen	1,000 m^3	1 per 1,000 m^3	*AS 1289*
Mulch for planting	Material quality	1 per contract	1 per contract	*AS 4454*

* or part thereof, per lot

Sampling from stockpile: A bulk soil sample must consist of 20 subsamples, taken from random locations around the stockpile. Collect at least 2 kg of soil, using a planting trowel or auger, from different locations to a depth of at least 150 mm.

Sub-annexure C11 – Pathways and cycleways

Table 0B-15 MITS 06B

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Subgrade	Compaction	1,000 lin m or 1,000 m^2	1 per 200 lin m or 200 m^2	*AS 1289.5.4.1* *AS 1289.5.7.1*
	Geometry: Surface finish level	10,000 m^2	1 cross section per 25 lin m	Survey
Subbase / base placement	Compaction	1 day's placement	1 per 100 lin m or 100 m^2	*AS 1289.5.4.1* *AS 1289.5.7.1*
	Geometry: Surface finish level and thickness	1 day's placement	1 cross section per 25 lin m	Survey and 3 m straight edge
Concrete supply	Refer **Sub-annexure C13**			
Concrete placement geometry	Geometry: Surface finish level and thickness	15 m^3	1 cross section per 15 lin m	Survey and 3 m straight edge
	Geometry: Surface dimensions	Single fabrication	As required to confirm design dimensions	Measure

Sub-annexure C12 – WSUD features

Table 0B-16 MITS 9E

Activity	Key quality verification requirements	Maximum lot size	Minimum test frequency	Test method
Establishment inspection	Approved Establishment Inspection Checklist	1 contract	Monthly inspection (frequency may increase depending on site condition)	*MITS 09E Water Quality Vegetation Establishment, Annexure A*
Establishment completion	Approved Establishment Completion Checklist	1 contract	1 per contract	*MITS 09E Water Quality Vegetation Establishment, Annexure A*

Sub-annexure C13 – Concrete for general works

Table 0B-17 MITS 10

MITS 10 Clause No.	Characteristic analysed	Test method	Minimum frequency of testing
Production assessment			
1.1.6	As specified in *AS 1379*		
Additional production assessment tests – Concrete mix containing greater than 50% manufactured sand as a percentage of fine aggregates			
1.3.2	Micro-Deval loss	*ASTM D7428*	1 test for total fine aggregate quantities at the trial mix submission
1.3.2.1.1	Particle size distribution of total fine aggregates with over 50% manufactured sand – deviation from nominated particle size distribution	*AS 1141.11.1*	1 per 1,000 tonnes
Additional production assessment tests – Concrete mix containing recycled crushed concrete			
1.3.2.1.3	Particle size distribution of recycled crushed concrete aggregate – deviation from nominated particle size distribution	*AS 1141.11.1*	1 per 1,000 tonnes
1.3.2.1.3	Particle density and water absorption of recycled crushed concrete aggregate	*AS 1141.6.1*	1 per 1,000 tonnes
1.3.2.1.3	Foreign materials content and organic contaminants content of recycled crushed aggregates	*TfNSW T276*	1 per 1,000 tonnes
1.3.2.1.3	Asbestos	*AS 4964*	1 per 1,000 tonnes
Additional production assessment tests – Concrete mix containing recycled granulated glass			
1.3.2.1.2	As specified in *TfNSW Specification 3154*		
Additional production assessment tests – Concrete mix containing recycled water			
1.3.4	As specified in *MITS 10 Concrete for General Works, Clause 1.3.4*		
Project assessment			
1.5.1, Annexure A	Concrete slump	*AS 1012.3.1*	For each homogeneously manufactured grade per day, 1 on each of the first 3 batches at the start of the day and after a nonconforming batch, then 1 per 4 batches

MITS 10 Clause No.	Characteristic analysed	Test method	Minimum frequency of testing
1.5.1, Annexure A	Concrete compressive strength	*AS 1012.9*	Sampling, testing and assessment for compliance must be in accordance with *AS 1379*
Annexure A	Air content of fresh concrete[1]	*AS 1012.4.2*, with compaction by internal vibration[2]	In mix design, and first load on each day of concrete placing
Additional project assessment tests – Fibre-reinforced concrete			
1.5.1.2.1	Fibre content	*AS 1012.25.1*	At least 1 sample per 500 m^3 or part thereof at the point of discharge for each concrete batch placed each day
Project assessment tests – Grout and mortar			
1.5.3, Annexure A	Grout compressive strength for grout filled revetment mattresses	*AS 1012.9*	1 pair of test specimens per 20 m^3 of grout, minimum 2 pairs per pour
1.5.3, 1.3.6.2	Grout compressive strength for grout used in other general concrete works applications[3]	*AS 1012.9*	3 test specimens per 100 kg of grout, no less than 2 test specimens total[3]
Project assessment tests – Sprayed concrete			
1.5.2, Annexure A	Compaction of sprayed concrete	*AS 1012.12.2*	1 pair of test specimens per 50 m^3 of concrete, minimum 2 pairs per pour, when required by Principal

[1] Required only for slipformed concrete.

[2] Use the same vibration pattern and duration as for cylinders in accordance with *TfNSW Test Method T304*.

[3] For grout used in other general works applications where grout is not load bearing, then the frequency of testing can be reduced as agreed with the Authorised Person.

Annexure D – Matrix for compliance with *AS/NZS ISO 9001* and this Specification

Clause	*AS/NZS ISO 9001*	Records	Project Quality Plan
2.1	Quality management system (QMS)	- Project Quality Plan - Quality manual	- QMS and procedures - Matrix for QMS - Subcontractor and supply/deliver Contractor's compliance
2.2	Control of documents	- List of who holds issued documents - Register of current document issue/revision	- Description of how quality records will be stored and maintained
2.3	Management responsibility	- Corporate QMS	- List of responsibilities and authorities for quality assurance activities
2.4	Resource management	- Provision of resources	
2.5	Design and development	- Design records	
2.5, 2.11 and 2.12	Purchasing	- Evaluation of Subcontractors and suppliers - Surveillance, audit of Subcontractors - Subcontractor supplied documentation - Certificate of testing by suppliers	- Method and results of Subcontractor evaluation for process validation - Supply/delivery/ Subcontractor Quality Plan
2.6	Control of production and service provision	- Procedures describing how to control work processes - Records demonstrating effectiveness of work process controls - Records of process validation when applicable	
2.6	Identification and traceability	- Product batch/traceability records - Lot identification register	- Method of maintaining traceability - Method of subdividing the work into lots and allocating lot numbers
2.6 and 2.9	Control of monitoring and measuring devices	- Calibration certificates - Survey control	

Clause	*AS/NZS ISO 9001*	Records	Project Quality Plan
2.7	Inspection and test planning	- ITPs - Records/checklists of inspection and testing - Conformity reports for each completed lot	- Procedure for inspections, testing and closing out work lots - Method for keeping records of inspections and test results - ITP and forms - Method for identifying, controlling and verifying inspection and test status
2.8	Monitoring and measurement	- Hold point and Witness point schedule - Inspection and test records	- Method for release of Hold points
2.10	Control of nonconforming product	- Nonconformity reports - Notifications of nonconformity register	- Method of registering and closing non-conformance
	Corrective action	- Corrective action reports and register - Corrective action requests	- Method of ensuring against corrective action