



Quality Management Plan

End of Trip Facilities Phase 2
Acciona Constuction Australia Pty Ltd
4248

Job Name: End of Trip Facilities Phase 2

Job No.: 4248

Head Contractor: ACCIONA CONSTRUCTION AUSTRALIA PTY LTD

Document Version Control

Documents should be increased to major versions (full numbers such as 2.0; 3.0; etc.) when the intent of the Document changes and needs to be communicated to all relevant parties.

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1	16/03/2022	First Issue	Madeline Walkington	Vaughan Aujard
2				
3				
4				

NOTE: [hyperlinked](#) documents throughout this document are intended for BMD Constructions internal reference only, specific documents can be made available upon request.

Quality Management Plan (QMP)

Business Management Systems (BMS) Plan

Document Template No.: HEQ-TPE-00355

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1. Introduction

1.1. Purpose

The purpose of this Quality Management Plan (QMP) is to provide a complete management document for onsite project staff to use on a day-to-day basis. The QMP is part of BMD's [Integrated Project Management Plan](#) (IPMP), which is a dynamic, working document that is subject to ongoing reviews due to potential changes to the contract, management practices, legislation, industry best practice, international standards and internal review. The IPMP is a working document to ensure changes are implemented as necessary to improve the efficiency and quality of the project as it progresses. The BMD Group (BMD) is committed to meeting the needs and expectations of its clients, legal and regulatory bodies. This commitment to quality and continual improvement is documented in the BMD [Quality Policy](#) and [Management Systems Policy](#) (Appendix A – BMD Management Systems & Quality Policies).

This QMP has been developed to provide a framework for the management of all quality aspects and impacts associated with the construction of End of Trip Facilities Phase 2.

1.2. BMD Integrated Management Systems

BMD adopts an integrated management approach with the aim to produce work to a high quality, in an environmentally conscientious manner and with the health and safety of all staff and public considered.

1.3. Management System

BMD Constructions Pty Ltd has a documented management system meeting the requirements of:

- ISO 9001:2015 (Quality Management Systems). (Appendix B – BMD Quality Certification)
- ISO 14001:2015 (Environmental Management Systems).
- ISO 45001:2018 (Occupational Health and Safety Management Systems).

The BMD integrated management system has been designed in accordance with HB 139: 2003 “Guidance on Integrating the Requirements of Quality, Environment and Health and Safety Management System Standards”.

BMD has third party certification to ISO 9001:2015, ISO 14001:2015, 45001: 2018 and accreditation with state and territory authorities, including the Office of the Federal Safety Commissioner (OFSC). Details of BMD's accreditations are documented on the [BMD Certifications Register](#).

This QMP should be read in conjunction with the following documents:

- [Business Management Systems Framework](#)
- Integrated Project Management Plan (IPMP)
- [Environmental Management Plan](#) (EMP)
- [Safety Management Plan](#) (SMP)
- Workplace Relations Management Plan - Federal and State Code (WRMP) - *refer to Acciona document BRISMETRO-BRM-GLOHRIR10-PLN-000001*.

1.4. Glossary

Abbreviations and terms used in this QMP are outlined below.

Abbreviation / Term	Definition
Administrator	Brisbane Move Quality Manager
Client	Brisbane Move, a partnership between Acciona Construction Australia Pty Ltd and Arup Australia Projects Pty Ltd
Head Contractor	Acciona Construction Australia Pty Ltd
ITP	Inspection and Test Plan
NCR	Non-Conformance Report
O&M	Operation and Maintenance Manual
Principal	Brisbane City Council
Project Quality Representative (PQR)	BMD's Quality Representative for this project <i>or Subcontractor Quality Representative (SQR)</i> as per the BMOVE scope document
Subcontractors	BMD's subcontractors
TfB	Transport for Brisbane, an organisational department of Brisbane City Council

2. Project Overview

2.1. Project Overview

This document has been prepared for contract number BM-CA-034-CNT.

Project Start Date: 25 March 2022

Project Completion Date: 22 June 2023

Additional details below:

Separable Portion 1 - Countess Street Layover

Start Date: 28 April 2022

Project Completion: 14 May 2023

Separable Portion 2 - Ernie's Roundabout

Start Date: 25 March 2022

Project Completion: 15 February 2023

Separable Portion 3 - UQ Lakes

Start Date: 05 July 2022

Project Completion: 22 June 2023

Separable Portion 4 - Dutton Park

Start Date: 05 July 2022

Project Completion: 01 December 2022

2.2. Project Locations

SP1 - Countess Street, Brisbane City

SP2 - Ernie's Roundabout, Herston

SP3 - University of Queensland, St Lucia

SP4 - TJ Doyle Memorial Drive, Dutton Park

2.3. Description of Works

Brisbane Metro will be a key part of Brisbane's greater transport network connecting the city to the suburbs. New high-capacity and high-frequency Metro services will run along dedicated busways and link with suburban bus and train services as part of a better-planned network. The client, Brisbane Move, is a partnership between Acciona Construction Australia Pty Ltd and Arup Australia Projects Pty Ltd.

The "End of Trip Facilities Upgrade Phase 2" package provides charging facilities for new-age electric buses and is separated into 4 portions. A summary of the scope at each location is shown below:

SP1 - Countess Street Layover

- Building demolition (2no.)
- Piled foundations (11no.)
- FRP pads & pile caps (31no.)
- Trenching through A/C, CTB & rock.
- Inground pit, conduit & earthing install.
- Cable ladder install (120m)
- Profiling & A/C Pavement construction (5400m²)
- Linemarking & signage.

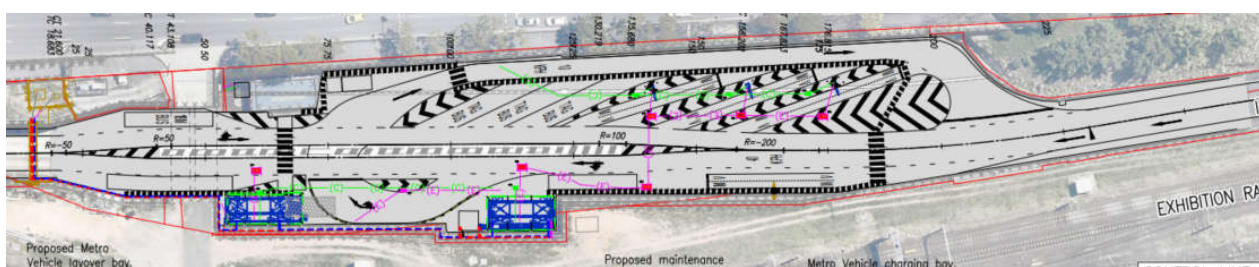


Figure 1 Countess Street

SP2 - Ernie's Roundabout

- Earthworks & ACM / PFAS material removal (2000m³)
- Piled foundations & pile cap FRP (32no.)
- Supply & install steel substation structure
- Inground pit, conduit, earthing & lightpole install.
- Horizontal Directional Drilling (3no. locations)
- Energex RMU construction
- RCP drainage & pit install (60m)
- Concrete pavement (1235m²)
- Swale & bio-basin construction
- Concrete barriers, signage, linemarking & landscaping.

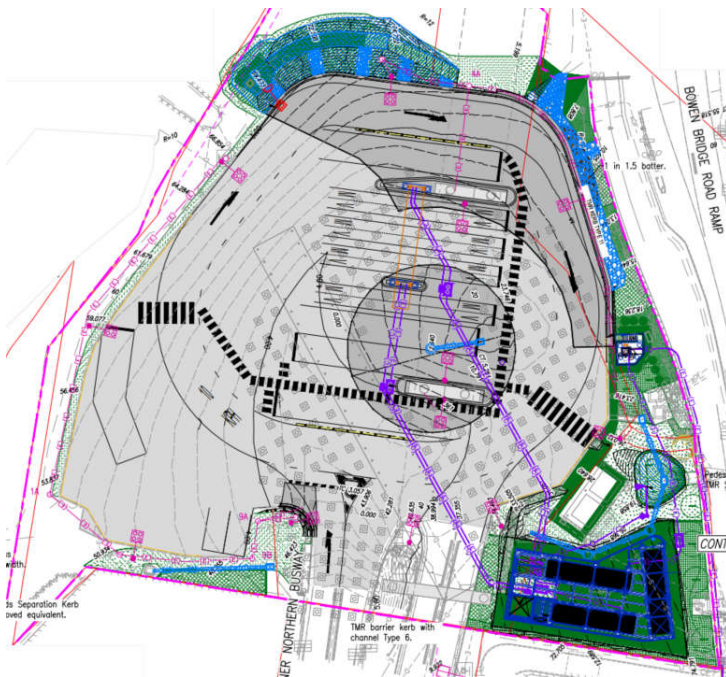


Figure 2 Ernie's Roundabout

SP3 - UQ Lakes

- Bus shelter & platform demolition
- Bikeway construction & realignment (1000m²)
- Bus shelter & platform construction (2no.)
- Boardwalk construction
- FRP foundations & plinths (40no.)
- FRP retaining wall (80m)
- RCP drainage & pit install (90m)
- Inground pit, conduit & ITS install.
- Road and platform lighting install.
- Inground water & downpipes.
- Concrete & asphalt road pavement construction (1800m²)
- Kerbing install (375m)
- FRP seating (10no.)
- Ballustrade & fencing install (130m)
- Linemarking, signage & landscaping

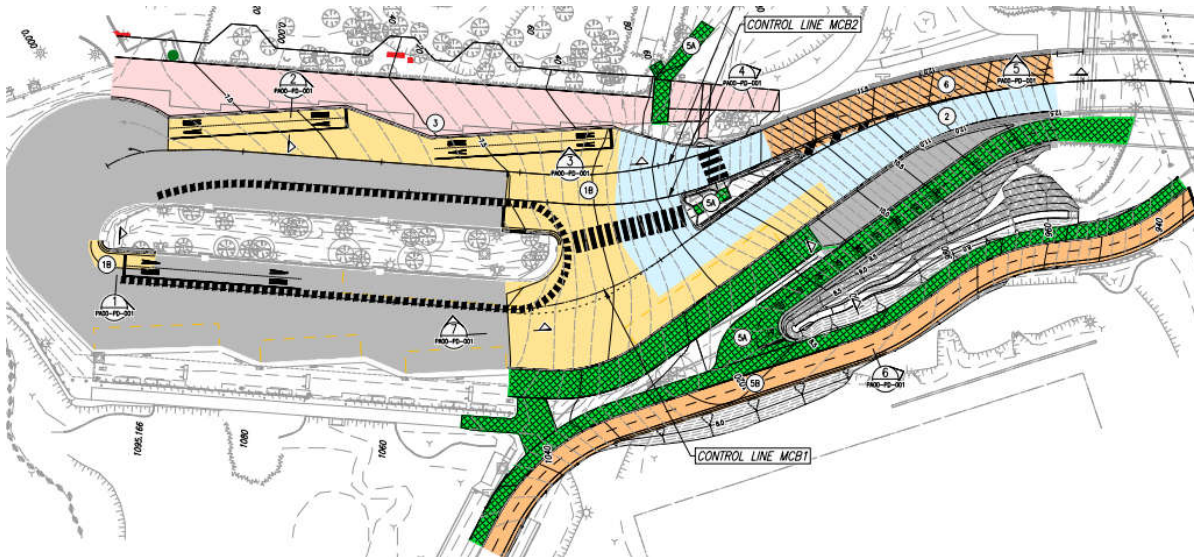


Figure 3 UQ Lakes

SP4 - Dutton Park

- Clear & grub inclusive of tree removal (1300m²)
- Acid Sulphate Soil removal (500m³)
- Embankment construction (2000m³ import)
- Inground pit, conduit & earthing install.
- RCP & concrete channel install (60m)
- Horizontal Directional Drilling (1no.)
- Energex RMU construction
- FRP slab & upstands (130m³)
- Walkway steelwork & cable ladder install
- Noise wall install (90m)
- Rock pitching & landscaping

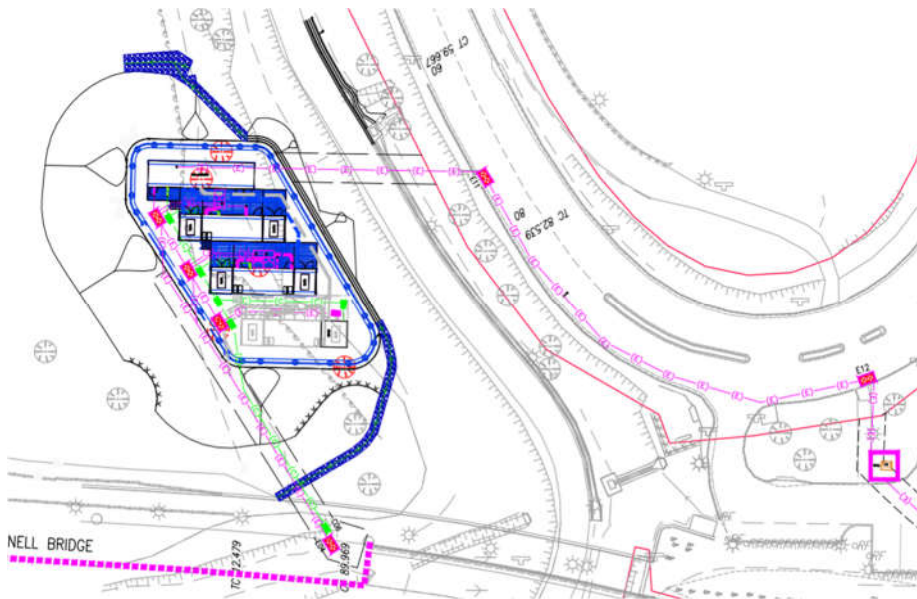


Figure 4 Dutton Park

3. Management

3.1. Project Management Team

The project manager for this project is Vaughan Aujard. Quality responsibilities of staff are described in the following section.

3.2. Staff Responsibilities

Quality responsibilities for all key site based project staff are defined as follows. Day and night shifts will have a changeover period where quality issues will be discussed and coordinated to ensure continuity of work and quality is maintained throughout the entire length of the project.

3.2.1. Project Manager

The responsibilities of the project manager are as follows:

- Successful completion of the project, including the exercise of contract management and cost control functions.
- Formal communication with the Head Contractor's representative, Jose Antonio Sanchez, as outlined in the contract.
- Obtaining the Head Contractors agreement for all nominated activities or actions, as per the contract.
- Detailed project planning.
- Communication to all staff, suppliers, subcontractors, adjoining landholders and the general public of the relevant aspects of project management arrangements.
- Review of the [Integrated Project Management Plan](#) (IPMP) and supporting management plans, and seek approval from the regional construction manager.
- Ensure the project team perform to the quality set and monitor the quality of that performance.
- Ensuring that adequate resources are available to each project discipline, including appropriately qualified and experienced staff.
- Assessments of training needs for all project staff and to ensure adequate training is provided.
- Ensuring documents and records are stored and managed as per the [Documents and Records Management](#) standard, and comply with the requirements of the Brisbane Move Documents and Records Management Systems.
- Review of all project related non-conformances and subsequent remedial actions and the corrective and preventive actions initiated by (or instigated by) the non-conformance.
- Negotiation of contract variations with The Head Contractor's Representative.

3.2.2. Project Engineer / Site Engineer

The responsibilities of the project engineer / site engineer are as follows:

- Responsible to the project manager for all site operations and management.
- Assists the Project Quality Representative (PQR) with all documentation, as required.
- Establishment and maintenance of the QMP.
- Document and drawing control, as per the [Document and Records Management Standard](#).
- Establishment and maintenance of project identification and traceability procedures including the Lots Management System and other controls to be implemented by project staff, subcontractors and testing service providers.
- Establishment and maintenance of [Inspection and Test Plans](#) (ITPs) including the management of inspection and test functions.
- Supply notification to the Administrator or Quality Nominated Person of upcoming hold point's required for the project.
- Monitoring performance of all suppliers of products and services including subcontractors.
- Prepare recommendations for project variations including work processes, cost estimates and contract variation negotiations.
- Be the point of contact for any internal or external audits and to ensure that any issues found as a result of the audit are dealt with in an appropriate and timely manner.

- Assessment of project non-conformances including recommendations for corrective and preventative actions and the review of these actions.
- Verify implementation of solutions.
- Control further processing/delivery/installation of non-conforming product until deficiencies or unsatisfactory conditions have been corrected.
- To assess the project resource requirements.
- Liaise with the regional business management systems coordinator on issues concerned with the management system.

3.2.3. Superintendent / Foreman

The responsibilities of the Superintendent / foreman are as follows:

- Responsible to the Project Manager for all onsite construction operations.
- Direction of sub-foreman and leading hands as well as the direct labour force.
- Communication to the workforce.
- Assisting with review and subsequent awarding of subcontractors, supply agreements and plant hire agreements.
- Monitoring and maintaining construction programs which have been set by the project manager or project engineer.
- Directing and monitoring of subcontractors, suppliers and plant hirers.
- Direction and monitoring of project survey resources.
- Under direction from the project engineer, assist site engineers in monitoring and maintaining relevant process control plans.
- Assist with assessment of project resource requirements including the training of staff and engaging specially qualified personnel.
- Reporting of all project non-conformances and suggestion of recommendations for corrective and preventive action.
- Assist in the preparation of project variations including work processes, cost estimates and contract variation negotiations.

3.2.4. Sub-foreman / Leading Hand / Worker

The responsibilities of the leading hand / worker are as follows:

- To assist project management staff in carrying out the quality objectives, as outlined in the scope of works.

3.2.5. BMD's Subcontractors

The responsibilities of subcontractors are as follows:

- To assist project management staff in carrying out the quality objectives, as outlined in the scope of works.
- Perform works in accordance with the contract requirements.
- Complete the applicable BMD inductions and comply with system requirements.

- Provide the relevant documentation and/or records, as required.

3.3. Project Quality Representative/s

The Project Quality Representative (PQR) is responsible for ensuring that the quality requirements outlined in the IPMP and QMP and associated management system procedures are implemented and maintained on the project. The PQR has the authority to take whatever actions are necessary to fulfil this responsibility. The PQR will be a full-time member of the project management team. The minimum required qualifications and experience for the PQR are:

- A Degree in Civil Engineering.
- Three years' experience.

Patrick Rosayro is the PQR for this project. Copies of the PQR Curriculum Vitae (CV) is available upon request. The PQR for the project have gained significant previous industry experience.

If the resource level appears to be insufficient for the effective implementation of the IPMP, the project manager and/or PQR will raise their concerns with regional management. Regional management will then assign other resources as appropriate to the circumstances. If the Head Contractor's representative is concerned as to the appropriateness of resource levels, the first point of contact is the project manager. The PQR and/or regional management may be contacted if the Client considers it appropriate.

The PQR will ensure the Project Team has daily liaison with the Head Contractor's nominated Project, Site and Quality Engineers in relation to construction control processes and quality compliance records as per this QMP.

3.4. General Manager - Systems (off-site role)

The general manager – systems has the authority and responsibility for ensuring that the requirements of the management system are implemented and maintained. The GMS is Patrick Pearl, available on telephone 0419 728 118 or e-mail Patrick.pearl@bmd.com.au. The GMS will ensure that periodical audits of the project are scheduled, and conducted, to ensure that the systems are complying with the standards and legislation that affect the project. Monthly reports will be forwarded from the project manager to the business management systems coordinators for reporting to regional and systems management, the GMS will report accordingly at the Senior Leadership Group (SLG) meeting.

4. Planning and Process Control

4.1. Construction Program

A construction program will be developed to help plan and monitor the progress of the project. This program will be held with the project manager who will track the progress of the project and make amendments to the program as required. The Client will receive a copy of the amendments as they are prepared.

4.2. Construction Procedures and Construction Method Statements

Construction Procedures (CP) will be submitted to Client for approval 15 business days prior to commencement of the relevant work activity. CPs are required where nominated in the relevant specification in the Scope of Works or on the design drawings, and will include the items nominated in the specification and/or design drawing.

CPs will describe the purpose and scope of the activity, what is to be done and by whom; when, where and how it is to be done; what materials, equipment and documents are to be used; and how the activity is to be controlled and recorded, as well as any other item required by the relevant specification.

In addition to CPs, where activities have been identified as complex or high risk by the project team, a Construction Method Statement (CMS) will be generated.

A Construction Method Statement (CMS) shall consist of, but not limited to:

- methodology
- timing
- plant and equipment
- risks and hazards, introduced and inherent
- chain of responsibility requirements
- commercial risk
- resources
- safety
- legal compliance
- environmental
- training
- materials
- associated WMS and BMD Core Operating Procedures.

Hazards and aspects identified on the CMS will be recorded in the project risk register.

5. Identification and Traceability

5.1. Lots

BMD acknowledges iTWOcx is to be used for quality management including ITP's and QA Lots, these will also be recorded in the BMD Lot Management System. BMD will raise, maintain and close all lots relating to our scope of works, and partake in planning sessions, quality management sessions, consultations and meetings with the Head Contractor as required, to ensure quality and lot management is completed progressively and is reconcilable with the monthly progress claims.

All items of work are to be subdivided into Lots or discrete work areas. A Lot will consist of any part of the works, which BMD considers to be a continuous portion of homogenous and/or representative material or end product produced under essentially constant conditions. The project manager or project engineer will determine the extent

of each Lot, and the maximum size of a Lot will be determined by the relevant Project Specification or ITP. Clearly marked drawings may be used, where considered appropriate, by the project manager or project engineer.

The bounds of each Lot will be determined before sampling and will be set so that each Lot is represented by a single tested sample, except where statistical methods, which require several tested samples to represent a Lot, are used. Each acceptance criteria may have different Lot boundaries.

Work on a Lot will not commence until the Lot identification has been established and is understood by relevant staff.

Discrete portions of a Lot which are visually non-homogenous and/or non-representative will be excluded from the Lot and will either be treated as separate Lots or reworked to the satisfaction of the Client. The Client has the right to reject a Lot that is visually non-homogenous and/or non-representative.

Where the non-conforming Lot is reworked and subjected to a fresh compliance testing program or is subdivided into smaller Lots, a new Lot number, or numbers, will be allocated to the reworked/subdivided Lot(s).

5.1.1. Lots Management System

The Lots Management System in the project site will be used to track the status and record details of each Lot. Each Lot will be given a unique Lot number. Each Lot number will start with a specific series number in relation to the type of activity; new Lots will be assigned the next sequential number to identify the elements that make up the Lot.

Any items related to a particular Lot shall be linked and referenced against each individual database entry. This includes, but is not limited to: Request for Information (RFI) correspondence; transmittals; Inspection and Test Plans (ITPs); test requests and results; Hold/Witness Points; non-conformance; corrective or improvement actions.

Engineers will raise, manage and close lots within iTWOcx as well as the creation of Hold Points, ITP's, etc. The PQR will be the primary point of contact for the recording, transmission and acceptance of quality related information.

5.2. Completed Lots

Information relating to a conforming Lot will be submitted to the Client progressively throughout the completion of works via a [Lot Conformance Report](#) and supporting documentation. Where a Lot is subject to delayed testing, these Lots shall be submitted to the Client with preliminary results. The final test results will follow as they become available. Non-conforming results will be processed in accordance with the Non-Conformances section of this document.

If a Lot does not achieve the specified characteristic value, the project engineer or appropriate delegate will investigate the Lot with a view to determine why the characteristic value was not obtained. For example, this process may involve a review of test results to determine if it is a material problem (e.g. excess or deficient moisture), and/or checking with the foremen and operators as to the actual process and circumstances applicable to that Lot. A corrective action will be raised in the project site NCR system and either an internal or contract,

depending on criteria previously defined, will be filled out and the procedures for non-conforming product and corrective action then followed.

The project manager will ensure all Lots are completed progressively and is reconcilable with the monthly progress claims.

5.3. Traceability

All materials, samples and test results will be identified by a Lot number and field location to which they relate; records will be stored in the project site Lots Management system.

6. Inspection and Testing

6.1. Inspection and Test Plans

BMD acknowledges iTWOcx is to be used for Lot Management, including Hold points, Witness Points and Material Approvals.

BMD acknowledges the Head Contractor ITPs are to be used where these are current, correct according to the latest project documents, and available for BMD use. Additional ITPs required will be generated as described below.

[Inspection and Test Plans](#) (ITPs) will be prepared for all manufacturing and construction activities. ITP's will include controls for receiving, in process and final inspection, and testing. The sequence of all activities identified in an ITP will be concisely described in technical procedures or by a process flow diagram.

Unless otherwise specified, the foreman will be responsible for arranging all inspections and tests on work in progress. This may be coordinated through the project engineer for soil tests, etc. ITP's are to be progressively signed off as works are completed, signed and closed out.

6.2. Sampling and Testing

The project manager or delegate will be responsible for arranging tests of materials at source or in stockpile. Inspection and testing status for a particular Lot can be determined by reference to the checklist for the Lot. All relevant test results will be attached to the applicable lot for close out.

Tests shall be arranged using the Test Requests system in the project site, and NATA accredited Construction Materials Testing Supplier holding current DTMR registration will be used as required by Project Specifications.

6.3. Frequency of Testing

Appropriate frequencies for inspection and testing will be detailed on the ITP. Frequencies will be in accordance with the specification or applicable Australian standard.

The Project Quality Representative (PQR) will review the appropriateness of the frequency of testing nominated in the ITP's. Such review will take into account the frequency of non-conformity detected, including non-conformities remedied by simple reworking.

6.4. Non-Conforming Test Results / Test Deficiencies

If test results indicate a non-conformance, the affected Lot shall not be covered or have any further work undertaken to the Lot until a non-conformance report has been submitted to the Head Contractor's Engineer and the corrective and preventative actions have been accepted and approved by the Head Contractor and the Principal, if applicable. BMD are to notify the Head Contractor within 24hrs from identification of a non-conformance.

Where testing is not undertaken at the required frequency or testing of a Lot is in any way deficient or not in accordance with the Standards and specifications relevant to the Works, a non-conformance report shall be submitted, and the above condition will apply.

6.5. Inspection and Test Status

The inspection and test status of any Lot may be determined by reference to the Lots Management system, completed or partially completed checklists, and associated measurements or test results. Items required to have inspection or test status labelling include:

- Precast concrete components for stormwater systems delivered to site for inclusion in the permanent works will be clearly labelled by the manufacturer to identify class and grade. Each unit shall be identified by marks and shall be recorded on an inspection form attached to the lot documentation which:
 - Remain legible until after the unit has been fixed in place.
 - Not be visible in the completed structure
 - Show the date of casting.
 - Show the correct orientation of the unit.
 - On other than units manufactured as a standard product, indicate the locations within the structure in accordance with an approved marking plan.

6.6. Inspection and Test Records

Records for each Lot will clearly show or reference the actual results obtained for any inspection and/or test and demonstrate conformity with the specified requirements. Records will include the frequency of testing (or number of tests) required and the actual frequency of testing (or number of tests) to confirm that the required frequency has been achieved.

Progressive submissions are required and records will be made available for Client review.

6.7. Measuring and Testing Equipment

Measuring and test equipment shall include measuring equipment for production purposes such as asphalt plant if applicable, which are to be managed in iTWOcx.

The project engineer shall identify all inspection, measuring and test equipment (other than laboratory equipment) maintained and calibrated by subcontractors, which is used or proposed to be used for work on the contract. For all onsite activities where inspection, measuring and test equipment is maintained and calibrated by a subcontractor, the project engineer will ensure that the subcontractor holds a valid calibration certificate and has provided a copy

to BMD. This documentation will be stored electronically as per the [Project Filing Structure – Constructions](#) and a hard copy held at the location where the subcontracted work is being carried out. BMD shall provide calibration certificates from a certified body for all equipment (inspection, monitoring & testing) governed by the requirement for accurate and reliable data. This will be submitted in iTWOcx.

Measurements for specific environmental compliance criteria such as noise levels, dust levels, vibration levels, water pH, etc. will be taken as applicable. Equipment used for such measurement will be of suitable precision, in good working order and recorded in the HSEQ Monitoring Equipment Register.

6.8. Hold Points and Witness Points (HP and WP)

BMD acknowledges iTWOcx is to be used for creation of HPWP, ITP's and QA Lots. The ITP will include responsibility for release of each Hold Point.

Work shall not proceed past a **HOLD POINT** until the Client has released that hold point, or a **WITNESS POINT** until that Witness Point has been inspected or sufficient time has been allowed for and the inspection waived by the responsible party.

The foreman and/or project engineer will ensure that the client is given adequate advance notice of hold points. Unless otherwise agreed on the approved Project ITP, **minimum 48 hours written notice** must be provided for all Hold Points and Witness Points. The required notice period shall be included in the ITPs.

All Hold & Witness Points are to be recorded in iTWOcx and will be released via the electronic Hold Points system on the project site

Any issues identified at an inspection will be resolved to the satisfaction of the Head Contractor before proceeding with the next stage of work.

6.9. Samples

BMD will submit sufficient samples to identify the range and mean of variation, as required. BMD will notify the Client representative that the sample is available for inspection at BMD's site office. Samples will be matched throughout the works. Prototypes and samples will be either the first item of the relevant kind or, items additional to the works and subsequently disposed of. Procedures will be established to ensure correct ordering of materials, to verify conformance on delivery and ensure conformance of the works.

Sample submissions, where required, will be coordinated as to not cause delays by making late submissions or submitting inadequate samples. A sample of each designated item will be submitted with supporting documentation. Ancillary items such as fasteners, flashings, seals, colour, etc. will be included. All samples will be kept in good condition onsite until completion.

The samples that have any variance in texture or colour will be rectified immediately and reported to the client.

6.10. Quality Audits

All audit records, whether they be externally arranged or internally scheduled, should be entered into the [Audits database](#), as per the [Audit Management](#) Standard.

BMD acknowledges the Head Contractor or its nominee has the right to undertake construction audit testing at any time or location, and that the Head Contractor is entitled to audit the Subcontractor's Quality Management System at any time, following the provision of reasonable notice by the Head Contractor. If a Non-Conformance is detected during such audit, the process for Non-conformances as detailed in this QMP will be followed.

6.11. Defect Inspections

On completion of construction activities, defect walks will be undertaken by BMD, the Head Contractor and Project Verifier to create a punchlist. Punchlists will be managed in iTWOcx and will document works that require rectification prior to project completion.

7. Purchasing and Subcontract Controls

7.1. Products and Materials

7.1.1. Product Selection

Products and services will be submitted via iTWOcx and approved by the Administrator in accordance with the AFC design or relevant specification, past experience with BMD or associated companies, those materials required by the specification and the product or services risk to health and safety, and/or the environment.

7.1.2. Material Supplied by the Client

Material supplied by the client shall be inspected and stored to prevent undue damage or deterioration. The Client will be informed of any defects noticed at the time of inspection.

7.1.3. Materials Handling

All precautions shall be taken to protect products from abuse, misuse, damage, deterioration and unauthorised use. The foreman shall ensure that all employees are adequately trained for safe execution of activities assigned to them. The foreman shall provide any safety equipment or personal protective equipment to workers to safely carry out the task.

Materials subject to segregation and/or contamination, for example road base gravel, shall be handled to prevent segregation or contamination, namely materials will be stockpiled on prepared slabs or hardstands and suitably separated.

All lifting equipment is to be properly maintained and rated for the loads placed on them. This requirement also applies to equipment used by BMD's subcontractors and hired machinery.

7.1.4. Materials Storage

Materials subject to deterioration, or likely to be damaged if left unprotected, shall be stored in containers, sheds or in other secured storage areas in accordance with client and supplier specifications and/or recommendations.

All chemicals and waste materials shall be handled and stored in a manner that ensures potential hazards or environmental damage is avoided, as defined in this document and relevant [Safety Data Sheet](#) (SDS). To detect

deterioration, the condition of material being stored shall be assessed by the foreman or the appropriate delegate at regular intervals or as nominated in the contract.

The project manager, foreman, site supervisor, project engineer or appropriate delegate shall have authority to receive goods into, or dispatch goods from, secure storage areas.

7.1.5. Use of Purchased Product

The foreman will ensure that materials and purchased products that are handled, stored and combined with other products, are installed and used in accordance with the manufacturers' recommendations. The foreman and/or the project engineer will ensure that the materials are compatible with the other products and works.

Material in storage will be checked by the employee responsible for the work prior to installation for signs of deterioration. The site foreman shall be notified of any material subject to deterioration for the appropriate corrective action.

Any supplier product non-conformities will be recorded in the project site NCR system and managed as per the Control of Non-Conformances section of this document.

7.1.6. Purchase and Use of Products with Recycled Content

Recycled content products and materials may be used where these are cost and performance competitive and where their environmental performance is at least equivalent to the non-recycled product(s). These however must be submitted via iTWOcx and approved by the administrator in accordance with the AFC design and relevant specification. The cost competitiveness of a product or material will be assessed by the project manager on a project lifecycle basis, considering issues such as impacts on construction practices, future maintenance and disposal requirements.

7.2. BMD Subcontractors

7.2.1. Subcontractor and Supplier Pre-Award Evaluations

Prior to commencing onsite, a subcontractor and supplier evaluation must be undertaken utilising the [BMD Subcontractor Pre-award Evaluation](#) and [Supplier Pre-Award Evaluation](#) forms and uploaded to the BMD [Company database](#), as stated in the [Subcontractor HSEQ Management](#) Standard. This will be used to determine if the contractor is operating under the project's, or their own, HSEQ systems.

Where the subcontractor or supplier has approval to use their own HSEQ system, it is also acceptable for their own documentation to be used when a minimum ISO9001:2015 accreditation is achieved. Records must be retained and produced upon request.

7.2.2. Quality Control

Subcontractors requiring the Client's approval will include the subcontract requirements given in the contract as applicable. Applications for approval of subcontractors shall include that part(s) of the proposed subcontract document showing the applicable subcontract requirements, and, when requested, BMD's evaluation of the

subcontractor's ability to meet subcontract requirements. This is in accordance with the BMD [Subcontractor HSEQ Management](#) Standard.

Where a client pre-qualified subcontractor is required by the specification (eg TMR supplier), BMD will ensure that pre-qualified subcontractors are used and their health and safety, environment and quality system implemented. To ensure the subcontractor meets the requirements of the contract and relevant State legislation, BMD will conduct an audit of the subcontractors' management plans.

7.2.3. BMD Subcontractor Close-out Evaluations

A Subcontractor Close-out Evaluation is to be completed for all subcontractors and suppliers whose value was greater than \$150,000 or whose work was deemed high risk. It is also to be completed for any subcontractors and suppliers who have performed very well, very poorly or who have had incidents, corrective actions or other issues onsite. The evaluation should be completed together with the supplier / subcontractor, however if they are unable to be present, the evaluation is still to be completed. Once saved the evaluation will be available in the [Company Database](#). This evaluation may include, but is not limited to:

- commercial performance
- timeliness
- work ethic
- HSEQ performance
- general project compliance.

8. Design Controls

8.1. General

All Design Controls are to comply with the Brisbane Move Design and Document Requirements, and are required to be submitted through iTWOcx.

Design works that are subject to control include design in respect of:

- temporary structures, for example piling pads, and the checking of permanent structures for construction loadings
- lifting devices for manufactured items requiring transport
- any alternative permanent structure or structural component proposed for the works
- concrete mixes for structures and pavements and, asphalt mixes for permanent works
- traffic control, temporary roadways and detours

8.2. Design Plans

Design plans will include the activities of all consultants or subcontractors engaged for the design work. Where a consultant or design subcontractor does not have a quality system conforming to the contract requirements, the

method of control and verification of the consultant/design subcontractor's activities will be included in this document. Design plans will be included as appropriate.

All design plans, including amendments, will be assessed to ensure that the risk profile for the project and site has not changed. Where this is not the case, the [Risk Register](#) will be updated and necessary mitigation controls will be circulated to relevant employees and subcontractors.

9. Control of Non-Conformances

9.1. Non-Conformances

Non-conformances in any aspect of the Works are to be reported to the Head Contractor immediately upon their identification and captured in iTWOcx within 24 hours.

All non-conformances will be recorded in the project site NCR system. Any non-conforming product reports issued by the Head Contractor shall be dealt with in the same manner as if the non-conformity had been identified by BMD.

Any supplier product non-conformities will be recorded and tracked in the project site NCR system. The supplier may be notified verbally of this non-conformance, however, a formal record will be created in the electronic system and transmitted to the supplier. This system allows all correspondence, documents and records relating to this non-conformance to be stored in a central location and available to relevant parties on request.

9.2. Corrective Action

Work involving non-conforming items will not be authorised to continue unless the corrective action has been approved by the Head Contractor and implemented by BMD or the relevant subcontractor.

Any Corrective Action Request (CAR) raised by the Client will be actioned. As per MRTS50 CL 10.2, the Administrator will issue a CAR, and within one working day of receipt of the CAR, the Contractor shall issue a Nonconformance Report.

The corrective action will be entered in the [Corrective and Improvement Action database](#) to prevent recurrence.

9.3. Preventive Action

Suitable analysis will be undertaken by site management to determine appropriate measures that could be implemented to prevent the occurrence of a non-conformance.

9.4. Review of Non-Conformances

Each non-conformance and the corrective measure implemented to control the non-conformance will be reviewed at a suitable time, where possible no more than 14 days after the non-conformance has occurred. This is to ensure that the corrective action is considered for similar and related scopes of work to eliminate the cause of a non-conformity and to prevent recurrence or occurrence.

9.5. Corrective Action Database

The [Corrective or Improvement Action database](#) will track the status of the non-conformance and implemented corrective action. The project manager will ensure all actions are closed within one month of raising.

As part of close out of NCRs, Works as Executed documentation to detail the actions undertaken to close out the NCR will be uploaded to iTWOcx.

10. Document Control

10.1. Electronic Document Management System (EDMS) and Correspondence

BMD acknowledges the project utilises iTWOcx and Lucidity and will comply with the EDMS use as per the Contract.

The latest approved drawings, management plans, and other documents will be downloaded from iTWOcx for use by BMD and its subcontractors.

BMD will:

- Implement the use of the EDMS to manage the transmit of related documentation and notices connected with the Works in accordance with the processes, procedures and systems as otherwise reasonably required by the Head Contractor
- Use the EDMS component for designated correspondence and notices relating to the Works between BMD and the Head Contractor to the extent required under the contract
- Upload quality documents, and other documentation which is required for the performance of the Works to the EDMS.

This will include:

- Inspection and Test Plans
- Management Plans
- Monthly Reports

10.2. Submission of Documentation - Internal / BMD & Subcontractors

All documents and records will be managed as per the Document and Records Management standard and stored in accordance with the Project Filing Structure.

Any formal project documents, internal or between BMD and its subcontractors, are to be issued via the Transmittal System within the project site. This system records:

- a unique identification number for each transmittal
- the reason for the transmittal; the date issued
- document title, description and revision of each file
- the recipients of the documents
- who issued the transmittal

Any amendments to documents will be redistributed to the relevant recipients.

10.3. Control of Project Documents and Records

All documents and records will be managed as per the [Document and Records Management](#) standard and stored in accordance with the [Project Filing Structure – Constructions](#).

Any formal project documents, internal or external, are to be issued via the Transmittal System within the project site. This system records: a unique identification number for each transmittal; the reason for the transmittal; the date issued; document title, description and revision of each file; the recipients of the documents; and, who issued the transmittal. Any amendments to documents will be redistributed to the relevant recipients.

Changes to this document and/or the management system will be implemented as soon as practical if this document and associated management system documents:

- do not adequately address the specification requirements
- are causing non-conformity
- must be changed as a result of an audit
- must be changed as a result of variations to the contract
- no longer represent the current and/or appropriate practice.

All documents are Uncontrolled once printed. The latest revision of documents is to be retrieved from the project EDMS or Sharepoint Site. When whole documents are superseded, the project manager or delegate will ensure that all superseded documents are destroyed, recalled and/or clearly marked as 'SUPERSEDED', and any changes to this document and/or the management system communicated either verbally or in writing. Electronic versions which are superseded will be archived or status updated to 'SUPERSEDED'.

SharePoint will store every occurrence of a document as a separate version of the file and allows each of the versions to be viewed and restored where necessary.

10.4. Drawing Management

Drawings will be issued by the Head Contractor via iTWOcx and the latest version will be available from the project site. Printed drawings are uncontrolled copies.

All BMD drawings, including BMD subcontractor or consultant drawings, that are to be transmitted and approved by the Head Contractor will be uploaded and transmitted via iTWOcx.

When a drawing is superseded, the project manager or delegate will ensure that the printed hard copy is destroyed, recalled and/or clearly marked as 'SUPERSEDED', and changes communicated to site personnel.

10.5. Change Control Documentation, Request for Information and Minutes

Where BMD requests to depart from the approved scope of works, prior approval will be sought via general correspondence in iTWOcx. Where the Head Contractor directs a change to the works under the contract, BMD will respond as to whether the change can be affected, in accordance with the contract documentation.

11. Records

11.1. Evidence Of Conformance – Progress Claims

Copies of the verifying and supporting documentation related to closed Lots for which payment is claimed in a payment claim shall be submitted to the Head Contractor's engineer/s for review at the time of or prior to, the payment claim monthly.

As a minimum the documents shall include:

- lot verification checklists;
- testing reports;
- conformance Survey Reports; and
- checklists

11.2. Project Records

Records will be stored in an electronic format within a SharePoint project site environment, unless otherwise agreed by the business unit general manager and General Manager - Systems. The file naming convention and location for these records will be saved in accordance with the [Project Filing Structure – Constructions](#).

Records which will be kept as applicable include, however, are not limited to:

- commercial components
- records of quality compliance
- test results
- technical specification(s)
- drawings
- environmental and safety monitoring/inspection reports
- internal audit reports
- external audit reports
- correspondence
- reports of health and safety, environment and quality incidents, non-conformances, complaints and follow-up actions
- minutes of management review meetings
- evidence of action taken as a result of such meetings/events
- induction and training records
- Records of monitoring by subcontractors against compliance limits.

BMD will provide the Head Contractor access to project records and will allow the Head Contractor to copy records if requested:

All relevant construction record needs to be submitted before the associated commissioning activities commence and should be submitted progressively, records will be submitted as per as per contract requirements.

At the completion of the project, all site records will be managed in accordance with the [Documents and Records Management](#) Standard.

12. Survey Management

Survey works will be conducted and managed in accordance with the [External Survey Requirements](#) and [Internal Survey Requirements](#) core operating procedures, Appendix D. Survey asbuilts will be undertaken in accordance with the contract documents, Brisbane Moves Specification for 3D As-Constructed Model and Brisbane Moves Survey. Where there are any differences between BMDs COPs and the project contract documents, the project contract documents shall take precedence.

All survey equipment used onsite must be calibrated and within test date. Copies of calibration certificates must be available upon request with details recorded in the project HSEQ Monitoring Equipment Register. All calibrated equipment is to be registered in iTWOcx under Measuring & Test Equipment.

13. Monitoring and Review

13.1. Audits

Audits will be conducted, stored and circulated as stipulated in the [Audit Management](#) standard.

13.1.1. Audit Schedule

The [Project Audit Schedule](#) will be developed and maintained by the project manager, or delegate, in conjunction with the systems representative. Refer to Appendix C Project Quality Schedule - 2022

Audits will be undertaken in accordance with the minimum frequency requirements stipulated in the [Audit Management](#) standard, with additional audits conducted upon request of the client. Audits will also include the activities of all key subcontractors engaged on the project.

Adjustment to Audit Schedule

The audit schedule will be adjusted when one (1) or more of the following conditions exist:

- when the results of previous audits indicate the need for a higher/lower audit frequency
- when significant changes are made to functional areas of the quality system, including reorganisations and revisions to procedure(s)
- when safety, performance or reliability of the product is in jeopardy, or suspected to be in jeopardy, due to non-conformity in the quality system
- when necessary to verify that the required corrective/preventive action has been taken
- when required due to changes in BMD's construction programme.

13.1.2. Unplanned Audits

Specific components of the management system may be audited more frequently where the general manager, general manager - systems, project manager or systems representative determines that:

- deterioration in performance of the system may occur rapidly if not audited more frequently
- any deterioration in functioning is found to have significant effect on work output
- significant system modification warrants particular attention to its performance.

The general manager – systems or management systems coordinator may also initiate unscheduled audits where non-conformances suggest that a special review of a segment of the management system is warranted.

13.2. Project Review

A management review will be conducted by the project manager and relevant project stakeholders annually or at least once during the project life cycle.

On completion of the project a formal review will be carried out by the project manager to evaluate the effectiveness of the health and safety, environment and quality measures onsite. The review shall also address construction techniques, subcontractors, materials, costs and staff performance with minutes kept providing a record.

14. Commissioning, Completion and Handover

BMD will work collaboratively with the Head Contractor throughout the project to ensure handover is completed in accordance with Brisbane Move's scope of works document. BMD will implement a progressive handover approach where required records and documentation are compiled for each portion of work as it is completed for example drainage, pavement, electrical.

14.1. As-Constructed Information

As-Constructed Information shall provide all information necessary to show and describe the infrastructure as, and where, it has been constructed. Fourteen days prior to the date for Practical Completion, BMD will submit to the Administrator all relevant As-Constructed Information specified in the Contract and Contract Scope of Works. The Administrator shall review the As-Constructed Information and advise the Contractor within 14 days of receipt of their completeness / suitability or otherwise. Materials rejected by the Administrator shall be revised, re-certified and re-submitted within 7 days

14.2. Testing & Commissioning

For applicable works, a Testing and Commissioning Plan will be developed and completed as part of the ITP for each system to be commissioned. This is a condition precedent to practical completion.

Where interfaces exist between BMD installed infrastructure and the Other Contractors or Stakeholders, BMD will facilitate required commissioning witnessing in coordination with the Other Contractor or Stakeholder to the extent required by the contract. BMD will provide the Stakeholder or Other Contractor with applicable quality documentation and commissioning information.

14.3. O&M Manuals

O&M Manuals for all systems/elements (including civil, structural, building, M&E, and ITS) shall be provided and must identify warranties, any ongoing inspection and maintenance procedures, and requirements, and manufactures' details.

14.4. Handover

BMD shall advise the Head Contractor when all Punchlist items are closed and the Scope of Works is ready for handover. A final joint defect walk will be undertaken by members from BMD, the Head Contractor and Project Verifier to verify that there are no outstanding punchlist items or defects that need rectification.

The defect walk will be managed via iTWOcx and BMD will rectify the defects within 14 days or longer where construction procedures to rectify the defect require longer works durations.

Appendix A BMD Management Systems & Quality Policies



Management Systems Policy

This policy encompasses all BMD Group subsidiaries including BMD Constructions, BMD Urban, Empower, JMac Constructions and Urbex. For ease of reference, the term 'BMD' is used throughout this policy to reference the BMD Group and its subsidiaries. This policy also applies to projects involving BMD being carried-out under a joint venture arrangement where no other policy of this type exists.

BMD's systems, information and records are a corporate asset, vital for both ongoing operations and in providing valuable evidence of business decisions and activities. The significance and commitment are demonstrated by the implementation of a standardised and integrated Business Management System (BMS). The BMS provides direction, guidance and objectives to ensure business needs, accountability and expectations are satisfied. BMD management and workers are dedicated and strive to:

- ensure compliance with all relevant statutory obligations in every jurisdiction in which BMD operates, that includes however may not be limited to quality, safety, environment, Commonwealth, State and Local Government requirements
- provide or assign the resources necessary to meet requirements
- comply with and exceed client's requirements and expectations (refer to BMD's Quality Policy)
- eliminate work related injuries and illness (refer to BMD's Safety Policy)
- prevent environmental harm (refer to BMD's Environmental and Sustainability Policies)
- comply with other requirements placed on BMD from external sources
- develop and sustain a culture that continuously strives to succeed in providing quality products and services
- establish measurable objectives and targets to ensure continual improvement of our BMS, and the operations it underpins
- promote the BMS by ensuring effective implementation and training is provided. Review of the effectiveness is achieved by undertaking internal auditing, management review, corrective and preventative actions.

A number of BMD operational groups currently hold industry recognised multi-site certifications for the BMS which covers either individually or collectively quality, safety and environment. BMD is committed to a program of extending applicable certifications to other groups to maintain our position and reputation as a leader in our industry.

It is the responsibility of every worker within BMD to:

- understand and apply the required statutory obligations, business policies, procedures and associated documentation as described within the BMS as it applies to their scope of work
- have input into the continual improvement of the BMS.



Scott Power
Group Director – Chief Executive Officer



Mick Power AM
Group Board Chairman

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Quality Policy

This policy encompasses all BMD Group subsidiaries including BMD Constructions, BMD Urban, Empower Engineers & Project Managers, JMac Constructions and Urbex. For ease of reference, the term 'BMD' is used throughout this policy to reference the BMD Group and its subsidiaries. This policy also applies to projects involving BMD being carried-out under a joint venture arrangement where no other policy of this type exists.

BMD workers, including contractors, are committed to the quality of our service and stated quality objectives by:

- ensuring our Quality Management System meets or exceeds the requirements of our clients, as well as legal and regulatory obligations
- maintaining a Quality Management System to meet or exceed the requirements of the ISO 9001:2015 Standard
- continually reviewing and improving the effectiveness of our management system
- the Business Management Systems team periodically reviewing the performance of the management system and quality objectives
- develop and sustain a culture that continuously strives to succeed in providing quality products and services
- ensuring the Quality Policy is communicated and available to our workers, and reviewed by the management team for continuing suitability
- maintaining a profitable operation to establish our competitive position in the market and reward our stakeholders
- promoting the Quality Management System by ensuring effective implementation and training is provided. Review of the effectiveness is achieved by undertaking internal auditing, management review, corrective and preventative actions. |

It is the responsibility of every worker within BMD to:

- understand and apply the required statutory obligations, business policies, procedures and associated documentation as described in the Business Management Systems as it applies to their scope of work
- have input into the continued improvement of the Business Management System.



Scott Power
Group Director – Chief Executive Officer



Mick Power, AM
Group Board Chairman



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Appendix B BMD Quality Certification



CERTIFICATE OF REGISTRATION

This is to certify that:

BMD Constructions Pty Ltd

ABN 59 010 126 100

1 Sandpiper Drive Port of Brisbane QLD 4178 AUSTRALIA
Unit 7, 189 Flemington Road Mitchell ACT 2911 AUSTRALIA
Level 3, 3 The Crescent Wentworth Point NSW 2127 AUSTRALIA
39 Georgina Crescent Yarrowonga NT 0830 AUSTRALIA
Level 1, 57 Mitchell Street North Ward Townsville QLD 4810 AUSTRALIA
45 Greenhill Rd Wayville SA 5034 AUSTRALIA
24-30 Camberwell Road Hawthorn East VIC 3123 AUSTRALIA
Unit 1, 175 Campbell Street Belmont WA 6104 AUSTRALIA

operates a

QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

ISO 9001:2015

for the following scope

Provision of Building, Civil Construction (including road and/or bridges) Mechanical, Engineering, Structural, Consulting Services, Project Management, Water & Sewer, Landscaping, Design, Contracting and Traffic Management Services

Certificate No: QMS44052

Issued: 16 April 2021

Originally Certified: 16 April 2021

Expires: 17 April 2024

Current Certification: 16 April 2021



Frank Camasta
Global Head of Technical Services
SAI Global Assurance



ISO 9001



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Appendix C Project Quality Schedule - 2022

Audit / Inspection / Monitoring Topic	Responsibility	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Worksite / Field ITP Reviews	Senior Project Engineer / PQR												
Quality Performance Monitoring: Monthly Report / Monthly Management Review	Project Manager												
Internal QA Audit (full)	Corporate Business Systems Manager with Quality Engineers	Refer to the Project Audit Schedule for details.											
Regulatory Authority and/or Certification Audit		Refer to the Project Audit Schedule for details.											
Unscheduled Audit/Inspection		Refer to the Project Audit Schedule for details.											

Scheduled

Completed

Appendix D Internal & External Survey Requirements - Core Operating Procedures

