BUILDING SUSTAINABLE FUTURES

Quality Management System

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Revision 0

COMPANY DETAILS

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INTRODUCTION

A quality management system (QMS) is a collection of business processes focused on consistently meeting customer requirements, and enhancing their satisfaction. A QMS is expressed as the policies, procedures, processes, and resources needed to implement quality management.

CBAC envisages the QMS as convergent with our sustainability vision, and social accountability initiatives. Our QMS has been formulated in accordance with ISO9001.

PURPOSE

To maintain and ensure that the documented management system:

- Accurately reflects current practice.
- Is user-friendly, and is an aid to CBAC personnel in the performance of their duties.
- Assists in continuously improving business performance.

QUALITY MANAGEMENT SYSTEM (QMS)

Quality Standard

All procedures are developed to comply with the requirements of **ISO 9001**.

Management Commitment

- Establish and maintain quality, occupational safety and health, environmental management systems.
- Promote and encourage customer awareness at all levels.
- Provide adequate resources to the pursuit of quality and customer satisfaction.
- Promote a culture of continuous improvement based on personnel and customer feedback.
- Establish measurable targets for performance and continually monitor achievement.

The Board of Directors shall appoint a **Quality Assurance (QA) Manager** responsible for the following activities:

a) Ensure the QMS is implemented and maintained in compliance with **ISO 9001**;
b) Report QMS performance to the Board for review and improvement.
c) Ensure customer focus is recognised throughout the organisation, as paramount to its success.

Location and Issue of Documents

Management System Documents

The QA Manager shall be responsible for the storage and issue of documents associated with the management system and recorded on the **Document Control Register**.

Codes and Standards

The **QA Manager** shall be responsible for the storage, control, and issue (where applicable) of codes and standards, which shall be listed on a **Document Control Register**.

Control of Records

Computer data shall be stored to ensure they do not deteriorate. Computer data shall be backed-up data. The system data shall be password protected to allow approved access only. The QA Manager shall be responsible for authorising access to records by customers, subcontractors, auditors, consultants, etc.

QMS review

This QMS shall be reviewed by the QA Manager and the Board of Directors annually.

Continuous Improvement

Suggestions and Improvements
All suggestions and improvements shall be logged on the **Suggestion Log** or **Deficiency Log.**

Deficiencies
Supplier deficiencies are reviewed and analysed at Board of Directors' meetings. **Continuous Improvement Reports** shall not be raised for supplier deficiencies.

Review of Deficiency Logs
The **QA Manager** and **Project Managers** shall analyse the **Deficiency Logs** to identify adverse trends and potential deficiencies on a annual basis.

Where action to prevent recurrence or further analysis of potential problems is appropriate due to a **Customer Complaint, Adverse Trend**, **System,** or **Product** deficiency, the **QA Manager** shall raise a **Continuous Improvement Report**.

Continuous Improvement Reports
Where the need for a **Continuous Improvement Reports** is identified, the **QA Manager** shall compile a **Continuous Improvement Report** as follows:

CONTINUOUS IMPROVEMENT REPORT

PROBLEM (What happened) **Approximate Cost: $_____** **Logged By:** **Date:**
WHY DID IT HAPPEN (Cause) This may involve discussions with other Personnel **Logged By:** **Date:**
POSSIBLE SOLUTIONS (How do we stop it happening again) Solutions to be carried out on a trial basis. Instructions may be verbal or by memorandum **Logged By:** **Action Date:**
EVALUATION: **Effective [ ] Ineffective [ ]**
COMMENTS (e.g. Ineffective review again, if effective indicate actions) This may involve changing a Flow Chart, Training, Replace equipment etc
Close Out (When above implemented and effective) **By:** **Date:**

Problem Solving (Cause and Action to Prevent Recurrence)
Problem solving is performed by one of the following methods:

1. Where a problem is an isolated occurrence, can be readily addressed and only requires immediate training or minor process amendment, the problem is investigated to determine the cause and the appropriate action to prevent recurrence.
2. Where the problem is a widespread occurrence which cannot be readily addressed, where procedures or clients specific requirements are not being followed (e.g. caused by a lack of training or failure to comply with management system requirements), it may be necessary to organise a team of personnel from the problem area to help identify the cause and appropriate action to prevent recurrence.

Review of Suggestions

Suggestion Logs are reviewed during the quarterly QMS reviews by the **QA Manager** and at Board of Directors' Meetings. The **QA Manager** shall ensure the person who made the suggestion is notified of the intended actions. The **QA Manager** shall review previous suggestions to verify actions have been implemented and are effective, then close out the suggestion by initialling the end column of the **Suggestion Log**.

Internal Audits

Internal audits shall be carried out by a person independent of the function being audited.

Audit Schedule

All elements of the QMS shall be audited annually. The **QA Manager** shall use an **Audit Schedule** to:

a) Plan all audits both internal and subcontractor (if applicable);
b) Control **Audit Reports** by identifying report numbers and verifying close-out.

Audit Method

Using the relevant procedure or other appropriate document as a reference, the **Auditor** shall review each section within the audit and verify compliance by:

a) Review of Records

Review the records generated by work activities; e.g. Review (both current and completed) Purchase Orders to determine if they have been completed correctly. Are all necessary details recorded? (Such as date to be supplied, delivery address, date of issue, etc.) Have they been authorised or signed off by the appropriate people?

b) Observation of the auditor's implementation

Observe activities as they occur to determine the extent to which they comply with procedures. Examples could be observing how a particular task is performed, such as compiling Purchase Orders, or selecting a subcontractor from the Approved Subcontractors List.

c) Determination of the auditor understanding of the requirements

This can be done by asking the auditor to explain how they would undertake a task, or by providing 'what if' scenarios; e.g., "Tell me what happens when you receive a request to Purchase goods?" Use who, what, when, where, why, and how to further explore and test their understanding of system requirements.

Report of Audit Findings

An **Audit Report** form shall be compiled by the **Auditor**. Areas of deficiency, minor discrepancies, and other general comments shall be recorded on the **Audit Report**. Activities audited and found acceptable shall be recorded; e.g., 'Conforms to QMS requirements'.

The final audit report shall consist of:

a) **Audit Report**;
b) **Deficiency Log** entries for minor deficiencies;
c) **Continuous Improvement Reports** for major deficiencies. In all cases, details shall also be logged on the **Deficiency Log**.

The **Audit Report** shall be approved by the **QA Manager**.

Close-Out

As a minimum the **Auditor, QA Manager, Project Managers** and **Board of Directors** shall discuss all audit findings, and if required, review the cause and action to prevent recurrence.

Follow-up and Close-out

Where there are no **Continuous Improvement Reports** raised, a follow-up activity is not required. Where required, the **Auditor** or **QA Manager** shall undertake a follow-up activity to verify that corrective actions have been effectively implemented. If acceptable, **Continuous Improvement Reports** shall be closed-out. When **Continuous Improvement Reports** have been closed-out, for each document, the **Auditor** or **QA Manager** shall initial the area shown on the **Audit Schedule**.

QMS Review

The **QA Manager** shall carry out quarterly reviews of the QMS using the **QMS Review Checklist**. The purpose of these checks is to verify that the key elements of the management system are being followed, and shall include discussions with personnel to instigate action to prevent potential deficiencies.

Minor deficiencies shall be logged on a **Deficiency Log** and major deficiencies on a **Continuous Improvement Report(s)**.

The **Deficiency Log** and **Continuous Improvement Report** numbers shall be recorded on the **QMS Review Checklist**. The completed **QMS Review Checklist** is reviewed at Board of Directors' meetings.

Board of Directors' Meetings

The Board of Directors shall meet once a year to review and action the following agenda items:

a) Previous **Board of Director Meeting Minutes**, ensuring that previous Audit Report items are completed and signed-off, and that any outstanding items are identified on the new **Board of Director Meeting Minutes**.
b) Previous **Audit Reports** (including results from the **QMS Review Checklist**) and proposed audit schedules including certifying bodies.
c) **Continuous Improvement Reports** to verify that preventive action and action to prevent recurrence have been implemented and are effective.
d) Supplier categories and deletions/additions to the **Approved Subcontractors List** with reference to the **Deficiency Log**.
e) **Suggestion Log**: Response to the suggestion shall be detailed in the 'Outcomes' section by the **QA Manager**.
f) New developments, resource requirements (e.g., personnel, equipment, etc.) and quality planning; e.g., areas where processes can be improved.
g) Training results and future training needs for personnel by reference to, and amendment of, the **Training Matrix**.
h) Any procedural changes to the QMS identified at the meeting.
i) Review Customer Feedback.
j) Review infrastructure and work environment.

Actions are to be finalised and minuted at the meeting. Personnel being nominated for a specific 'action' shall report the findings at the following meeting or sooner where indicated.

Employment and Training

Personnel Requirements

Minimum levels of experience, qualification, and responsibilities and authorities shall be defined in the **Job Description** form for each position and approved by the **Board of Directors**.

Selection of New Personnel

The responsibility for recruitment lies with **Functional Manager**.

Selection of acceptable personnel shall be based on the pre-requirements for the position, and determined by one or more of the following:

1. Personal interview;
2. Contact with previous employer(s);
3. Recommendation by other personnel;
4. Documented evidence of qualifications, skills and references;
5. Previous employment with the Company.

All applicants shall complete an Application for Employment form and/or submit formal resumes.

Notification of Engagement

Successful applicants shall be notified either by phone or letter.

Employee Induction

Where successful applicants are considered suitable but lack skills or knowledge (as required by the Position Specification), they may be employed provided that the training requirements are identified.

Identification of Training Needs

The Functional Manager/Project Manager shall be responsible for identifying training needs. Training needs may include specific items, such as new developments (e.g., computer training, skill training, etc.).

Training needs can be identified by any of the following methods:

1. Review of Continuous Improvement Reports, where the corrective action requires specific training to prevent recurrence;
2. Internal auditing or QMS Review checks, which identify a deficiency in skill or knowledge;
3. On-the-job observation and assessment, which indicates a skill or knowledge deficiency;
4. Career development training needs identified by the Company, or requested by the individual.

Training needs and requirements shall be discussed and reviewed at Board of Directors' Meetings.

All training needs and requirements shall be identified on the Training Matrix by the QA Manager.

Training Methods

Training shall be carried out by an appropriate Trainer, who shall, as appropriate:

1. Define the scope (e.g., training on Word for Windows, auditing, safety, etc.);
2. Identify responsibilities and authorities;
3. Define any specific requirements;
4. Describe how the activity is to be carried out including verifications and approvals required; e.g., signing of forms, procedures;
5. Provide practical demonstrations;
6. Organise mentor for a trial period.

Training shall be referenced to system documents (e.g., procedure, method statement, etc.), specific project requirement, or specific client requirement.

Safety Training
Safety Induction Training shall be recorded on the Induction Schedule. Further training, if required, shall be recorded on the Training Matrix.

Assessment of Training
The Trainer shall assess the effectiveness of training and when satisfied, shall notify the QA Manager, who shall then complete the Training Matrix.

Equipment Calibration

CBAC calibrate test equipment on an as-required basis. Before commencing a Recorded Test, personnel must check that the equipment has a current calibration label, and there is a current calibration certificate. If the test equipment does not display a current calibration label and the current calibration certificate is not available, the equipment must not be used for Recorded Tests.
Equipment that requires calibration is returned for calibration by an approved contractor. The **approved contractors** shall ensure that the environmental conditions are suitable for the calibration tests.

Calibration Status
The approved subcontractor will attach a self-adhesive label to the equipment which identifies the

- Approved Contractor
- Calibration date
- Next calibration due date

Procurement Procedure

Quotations
Request for quotation may be obtained by the Project Manager using either email or telephone. For verbal quotations request the supplier to 'read back' the quote details. Quotations may be received from non-approved suppliers, providing they are properly assessed.

Purchase Orders
Purchase Orders shall be compiled by Project Managers or Functional Managers. Each order shall contain name of full description of item, delivery details, quoted price, and all other relevant information. Purchase Orders are authorised by Project Managers or Functional Managers.

Approval of Purchase Orders
All Purchase Orders over US$10,000 must have approval of 2 CBAC Directors before being finalised unless the purchase order is for items which form part of a pricing agreement.

Order Change Control
Where a Purchase Order, which has already been issued, needs to be changed, a new Purchase Order shall be raised. The new order shall state 'This order replaces Purchase Order No XXXX'. For minor changes, the original order may be changed providing the change is confirmed by telephone and 'read back' by the supplier.

Project Control

Contract Award

On receipt of an order, the **Project Manager** shall carry out the following:

- Liaise with the **Estimator** and verify capability to meet specified requirements;
- Allocate a job number from the **Job Log**;
  For projects of a minor nature and limited duration, the job log shall be signed-off as confirmation that all appropriate items requiring attention, as covered by the Project Check List, have been dealt with.
- In consultation with the **Estimator**, identify any immediate discrepancies between tender and award;
- Oversee and supervise allocations of budgets;
- For larger contracts, organise a pre-start/handover meeting between the Project Team and **Estimator**;
- Oversee and supervise the re-engineer/re-measure of the project;
- Identify customer supplied drawings/specifications by job number.

The **Project Manager** shall, by reference to all tender documents and relevant CBAC forms, compile the **Project Checklist**. All items on the checklist shall be addressed. If not applicable, write 'N/A'.

Contract Review Project Control: Example

TITLE				**JOB No**	
CLIENT				**PH. No**	
CONTACT				**FAX No**	
ITEM	**Description**	✓	**ITEM**	**DESCRIPTION**	✓
1	Confirmation of order	✓	14	Personnel	✓
2	Specifications/Register	N/A	15	Site documentation	✓
3	Drawings/Register	✓	16	Site procedures manual	✓
4	Records Required by Client	✓	17	Insurances	✓
COMMENTS (refer Item No.)					
Item 4 Client requires all Test Reports and Inspection and Test Summary for each area					
Item 12 - need to employ 8 Electricians for six weeks					

The Project Manager shall compile the area of the Project Checklist identified as 'Contractual Implications'. Once complete, the Project Manager shall sign and date the Project Checklist. This verifies full contract review, and that CBAC has the capability to meet specified requirements.

Where traceability is a contract requirement, the **Project Manager** shall develop a plan to ensure client requirements are met.

Where required by contract, a project specific **Quality Plan** and/or **Inspection and Test Plan/Procedure** shall be developed by the Project Manager.

Quality Plans consist of a management manual, procedures, method statements, inspection and test plans, and an audit schedule. Project specific requirements shall be added to the Quality Plan incorporating such items as client specifications, codes, and contract documents.

Quality Plans are also used as reference documents for hold, witness, and monitor points. These are identified under the 'Inspection and Test Plan' section of the Quality Plan. It is not a requirement to initial each item number at the completion of each activity unless specified in contract documents.

Site Mobilisation
The Project Manager shall be responsible for site mobilisation of plant and equipment, project materials, personnel, and subcontractors.

Site Induction
As a minimum, all personnel shall have an induction. Where required by contract, all personnel, including subcontractors, shall be inducted by the client prior to site mobilisation.

Planning
Where required by the Project Checklist, all contracts shall, as a minimum, have a Project Schedule. The Project Manager shall compile a Project Progress Report monthly. These reports shall be reviewed at Board of Directors' meetings.

Variations to Contract
Variations to the original scope of work shall be addressed in writing ONLY. The Project Manager shall compile either a Pricing Sheet, or Day worksheet. Variations shall be submitted to the client as indicated with Project Checklist.

Customer Supplied Product
Inward goods inspection and positive identification of customer supplied product shall be carried out.

Equipment Maintenance
All equipment, which cannot be readily replaced, shall be maintained to ensure consistency of operation. Where necessary, an equipment schedule will be developed by the Project Manager.

Handling, Storage, Packaging, Preservation & Delivery
This shall be carried out in accordance with the CBAC OHSMS and EMS documents.

Contract Review and Job Control

Tenders
As a result of an inquiry, the **Project Manager** may be required to conduct a site investigation and/or provide a quotation to the client. Where a site investigation is conducted, the **Project Manager** shall determine the amount of materials and man hours to complete the job. Upon return to Head Office and for quotations only, the **Project Manager** shall:

a) Allocate costs to materials;
b) Sign and date the **Pricing Sheet** as evidence of review;
c) Where the client has requested an immediate start, the quotation may be issued verbally, ensuring that details of the quote are 'read back' to the client;
d) Where the client requests a formal quotation, does not request an immediate start, or where the **Project Manager** considers the quotations 'complex', a Letter of Quotation shall be issued to the client;
e) All formal quotations shall be entered in the **Tender register.**
f) All quotations in excess of US$20,000 shall have **Board of Directors'** authorisation prior to submission.

Tender Evaluation
Tender documents may be received by mail or collected from the client by the **Project Manager** who reviews all tender documents and decides to accept or reject the invitation to tender and notifies the client accordingly (where required by the Tender Documents). The **Project Manager** shall record the tender in the **tender register**.

Tender Preparation
The **Project Manager** shall review all tender documents for:

a) **Verification:** Check that all documents, drawing numbers and revisions correspond with invitation to tender or document transmittal;
b) **Capability:** Verify that CBAC has resources and capability to comply with project requirements;
c) **Clarity:** Ensure that scope of work is clearly defined, contact client for written confirmation/clarifications if required;
d) **Subcontracts:** Identify portions of work to be subcontracted; e.g. installation, testing, design, etc.

Tender Review

The **Project Manager** shall review the tender package for CBAC capability and costs, and allow a degree of mark up for overheads and profits based on:

a) Project risk;
b) Existing or anticipated future work load;
c) Competitiveness of other tenders (if known);
d) Possibility of future contracts with client.

Contract exclusions or clarifications shall be identified, and the tender price finalised and submitted to client by:

a) Client supplied tender document (if applicable);
b) Formal letter.

After review all tender, submissions shall be approved by the **Board of Directors**.

Tender records shall be kept in the **Tender File** comprising tender submission together with back up information, i.e.:

a) Take offs and calculations;
b) Material and subcontract quotations, etc;
c) Tender drawing.

Contract Award

Prior to acceptance of any contract the **Project Manager** shall identify any discrepancies between quotation and contract awarded.

Planning

Planning for all jobs is performed by the **Project Manager**, in accordance with:

a) Availability of personnel
b) Skills of personnel
c) Location of personnel
d) Client preferences
e) Time of the day and location of personnel's home for jobs requested at the end of the day
f) Availability of materials

Inward Goods Inspection

General
Inward goods inspection shall be carried out by the **Project Manager**. This method statement applies to both Head Office and Sites.

Purchased Items
All items purchased by **CBAC** shall be inspected as follows:

1. Check goods against delivery documentation;
2. Check delivery for damage or discrepancies;
3. Check goods against copy of **Purchase Order** and **Drawings** (if applicable);
4. If OK, sign delivery documentation;
5. Where there are discrepancies, identify either supplier deficiency or incorrect **Purchase Order**. Non-conforming items shall be quarantined and identified; i.e.. 'Do not use';
6. No product shall be released without passing inspection.

Client Supplied Materials
Client supplied materials shall be inspected as follows:

1. Check goods against delivery documentation (e.g., transmittal);
2. Check goods are not damaged. Items which are damaged or otherwise not acceptable shall be quarantined and identified; i.e. 'Do not use'. In such cases, the Project Manager shall notify the client in writing;
3. Check goods against drawing and/or Project Checklist;
4. Identify goods with job number and client's name.

Unless all items can be positively identified, client supplied materials shall be stored separately from CBAC supplied materials.

Handling
All products, at whatever stage of installation, shall be in a manner such as to prevent damage or deterioration. Where applicable, dangerous goods are labelled, handled, and stored in accordance with codes and regulations.

Storage and Packaging
All materials shall be stored to maintain product quality and identification (i.e., location and/or part/item numbers).

All incoming bulk materials shall be stored in a suitable and secure area.

Products liable to deterioration shall be identified and assessed.

Products shall be packaged in such a manner as to provide adequate protection from damage during transit, storage, and subsequent installation.

Packaged materials shall be marked by labels, tags, paint, marker pen, or other appropriate means.

Preservation
All products shall be preserved during storage to maintain suitability and accuracy.

Delivery
A record shall be kept which identifies product, quantity, customer, and destination of product dispatched.

The product shall be protected in a manner as to maintain quality until delivery and, where contractually specified, this protection is extended to include delivery to destination and installation.

Site Control

Project Documentation
A job file shall be compiled by the **Project Manager** which shall incorporate:

- Project Checklist
- Contract Information Sheet
- Purchase Order or Letter of Intent
- Tender documents (including scope of works)
- Bill of Materials (if applicable)
- Production Control Sheet
- Client specifications (if applicable)
- Construction Schedule
- Others as identified on Filing Index
- Client Nominated Forms
- Deficiency Logs and Continuous Improvement Reports
- Technical Query Sheet

The **Project Manager** shall progressively initial completed items which conform to client's requirements. This may be carried out in conjunction with the client and end user. No work shall proceed until relevant inspections have been carried out unless the **Project Manager** logs information in the **Deficiency Log**.

Site Equipment Hire
Where the **Project Manager** identifies a requirement for equipment hire, a **Plant Hire Application** form shall be compiled and issued to the **Project Manager**. Where items of plant or equipment have been lost or stolen, the **Project Manager** shall complete a **Loss of Plant** form.

Punch Listing
Where required by contract, the **Project Manager** shall compile a **Punch list** of outstanding items. This can be carried out individually or in conjunction with client and end user. Once all items on the Punch list are complete and comply to contract requirements, the **Project Manager** (including client and end user, if required) shall sign the bottom of the **Punch list**.

Project Completion
On completion of a project, the **Project Manager** shall carry out the following:

1. Ensure area is clean and tidy;
2. Ensure all client required documentation is complete;
3. Ensure all **Inspection Checklists** and **Test Reports** are complete;
4. Ensure (where required by contract) all **Inspection and Test Plan/ Procedures** are signed off and complete;
5. As-built drawings complete (where required by contract);
6. **Punch list** is complete;
7. Obtain a confirmed Practical Completion Date for the project and end of Defects period;
8. All surplus materials/tools are packed correctly and are returned to CBAC headquarters or suppliers;
9. Demobilise site and organise transport.

When all the above are verified, the **Project Manager** shall compile and sign the bottom of the **Project Checklist**.