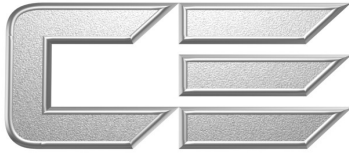


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Quality Assurance Manual

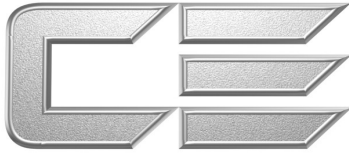
“ Current Electrical is committed to leading the market in satisfying customer needs by providing versatile and innovative electrical and control solutions...”

We take pride in the ability and experience of the staff at Current Electrical 2000 Ltd to reliably deliver quality work, profitably to all...”



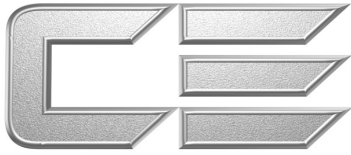
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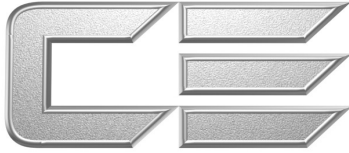


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Quality Policy

“ Current Electrical 2000 Ltd is committed to satisfying its customer requirements by achieving and maintaining quality service and products that meet or exceed customer expectations...”

“Current Electrical objectives are to achieve, maintain and improve quality of product and service provided so as to consistently meet customer needs, and instil confidence in the purchaser that the intended quality standards will be achieved in the delivered product...”



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Section 1: Introduction:

1.0 Manual Scope:

- This manual outlines the Current Electrical quality management system, the documented procedures established for the quality management system, and a description of the interaction between the processes.

This relates to all contracting activities carried out by Current Electrical Limited (Hereafter called the 'Company') and by the company's nominated sub-contractors.

Such activities may include, but not necessarily be restricted to:

- 1/. Supply, Design & Installation of Electrical control systems.
- 2/. Electrical Contracting, Industrial and Commercial .
- 3/. Production of special purpose machinery, both to the company's own design and to client's specified requirements.

1.1 General Note:

- Any specific Quality Assurance procedures required for awarded projects will be determined during the contract briefing with the client after inspection of this manual, and will be attached to this document as a supplement.
- Current Electrical will endeavour to incorporate it's own internal quality assurance procedures to compliment client based quality assurance methods as and when required.
- **Where Current Electrical quality assurance procedures exceed job requirements unnecessary procedures will be omitted.**
- **All works by Current Electrical will be undertaken in accordance with company health and safety policy which is in line with HSE Act.**

1.2 Company Structure:

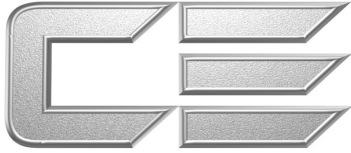
The company is a private registered limited liability company, and was incorporated in 2000. The company management structure follows overleaf (Fig 1.0)

All enquires regarding matters covered by this manual are to be addressed to:

Quality Assurance Manager
Current Electrical 2000 Ltd,
PO Box 71114,
Rosebank,
Auckland.

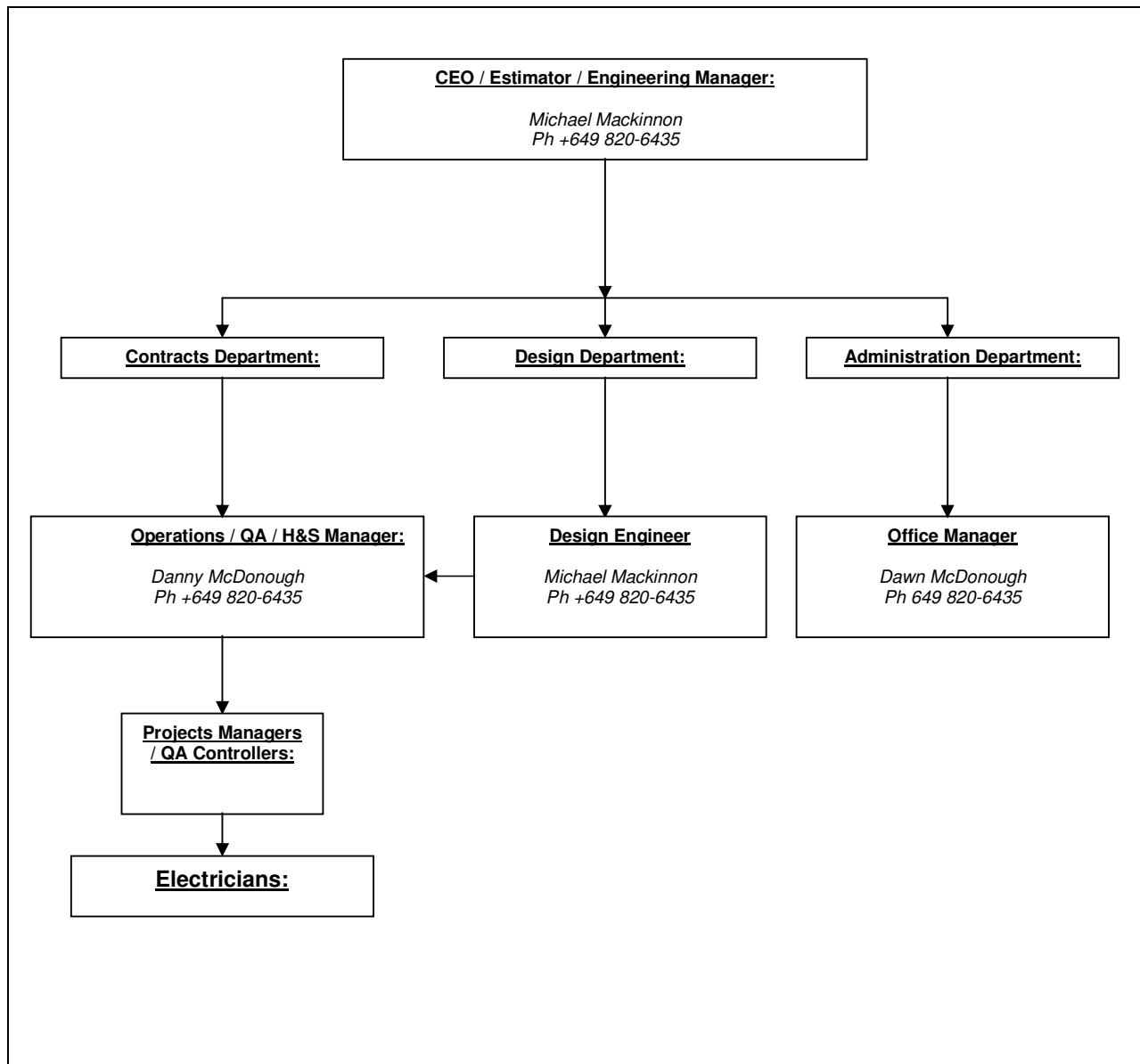
Current QA Manager: Danny McDonough –

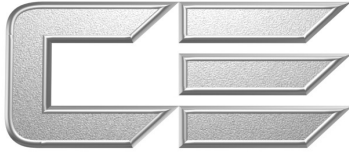
email – danmac@currentelectrical.co.nz



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Figure: 1.0 Current Electrical Management Structure:





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Section 2: Management Responsibilities:

2.0 Note:

- It is the responsibility of all company employees to ensure the total and correct application of all the relevant Quality Assurance procedures outlined in this manual, quality assurance procedures are for the purpose of problem and risk prevention and assist in achieving and maintaining quality products and service.
- Due to fluctuating respective workloads; roles and job requirements of management personal can often vary; whichever role is undertaken, the respective quality assurance responsibilities must be strictly adhered to so as to maintain appropriate quality control standards and communication.
It is therefore each individual's responsibility to know and understand the requirements of their acting role according to this manual.

2.1 Chief Executive Officer (CEO):

- The CEO takes overall responsibility for quality assurance, contract management and client liaison on contractual and quality assurance policy matters / Issues arising.

2.2 Engineering Manager / respective Estimators:

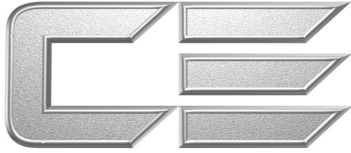
- The Engineering Manager / Estimator is responsible for attaining all specifications and information pertaining to Quality Assurance and production from prospective clients during the contractual process (i.e. Current Electrical QA requirements & client respective requirements), this information is then to be correlated according to company standards and given to the appropriate Project Manager / Workshop Foreperson during the handover process.
- The Engineering Manager / Estimator is required fill out the **Project Summary Form 01A (Ref Appendix A)** and provide the **Operations Manager** with all relevant information regarding to production requirements.

2.3 Operations Manager:

- The Operations Manager is responsible for ensuring the correct operation and usage of the quality assurance procedures within the company's operations and assist project managers in correlation of documentation.
- The Operations manager is also responsible for keeping record of certification and calibration documents for all company equipment and notifying electricians of required re-testing dates.

2.4 Project Managers:

- The respective project managers are responsible for the detailed operation of quality assurance and quality control programs solely onsite, and in-house programs in conjunction with the operations manager. They will prepare, supply, maintain and correlate all documents relating to quality assurance / control and liaise with the client and client quality assurance representatives on all matters relating to quality control.
- The project manager is entitled to direct access to the Quality Control Manager where matters of quality control appear to conflict with production and or delivery.
- Project Managers are to report any quality non conformity in supplied works to the operations manager and submit written record using a **Quality Non-Conformity Report 05MS (Ref Appendix A)**, a copy of this form is to be given to the Quality Assurance Manager.
- Project Managers are responsible for obtaining the certification and calibration certificates for all machinery, tools, equipment and measuring instruments under their control when notified by the quality manager. They are responsible for day-to-day monitoring and checking of staff jobs and removal from service any equipment found that may jeopardise company quality standards.



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2.5 Electricians:

- Electricians are responsible for implementation of quality control procedures as detailed in the quality manual and as requested by respective project managers and or estimators, they are to ensure procedures are carried out correctly and any quality issues rectified and brought to the notice of the project manager / operations manager via a **Quality Non-Conformity Report 05MS (Ref App A)**.
- Electricians are directly responsible to the Project Manager in day to day checking of works through respective shops, charge hand is also to assist the Operations Manager in checking works meet company quality standards and client requirements before delivery, according to issued quality forms.

2.6 Quality Manager:

- The quality manager is to ensure that all quality assurance procedures are adhered to, and that the control systems are implemented and maintained. Occasional spot checks of documentation and the organising of an annual quality assurance audit will assist in achieving this. The quality manager will receive and document client feedback forms, and report comments during system reviews.
- Quality manager will also correlate all Quality Non-Conformity Reports and inform top management of the performance of the quality management system and any need for improvement. Will also organise with CEO respective quality management meetings for system review (6 monthly or as requested).
- Quality Manager will promote both the awareness of customer requirements throughout the company, and the need for excellent internal communication.

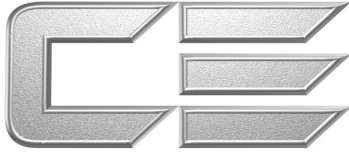
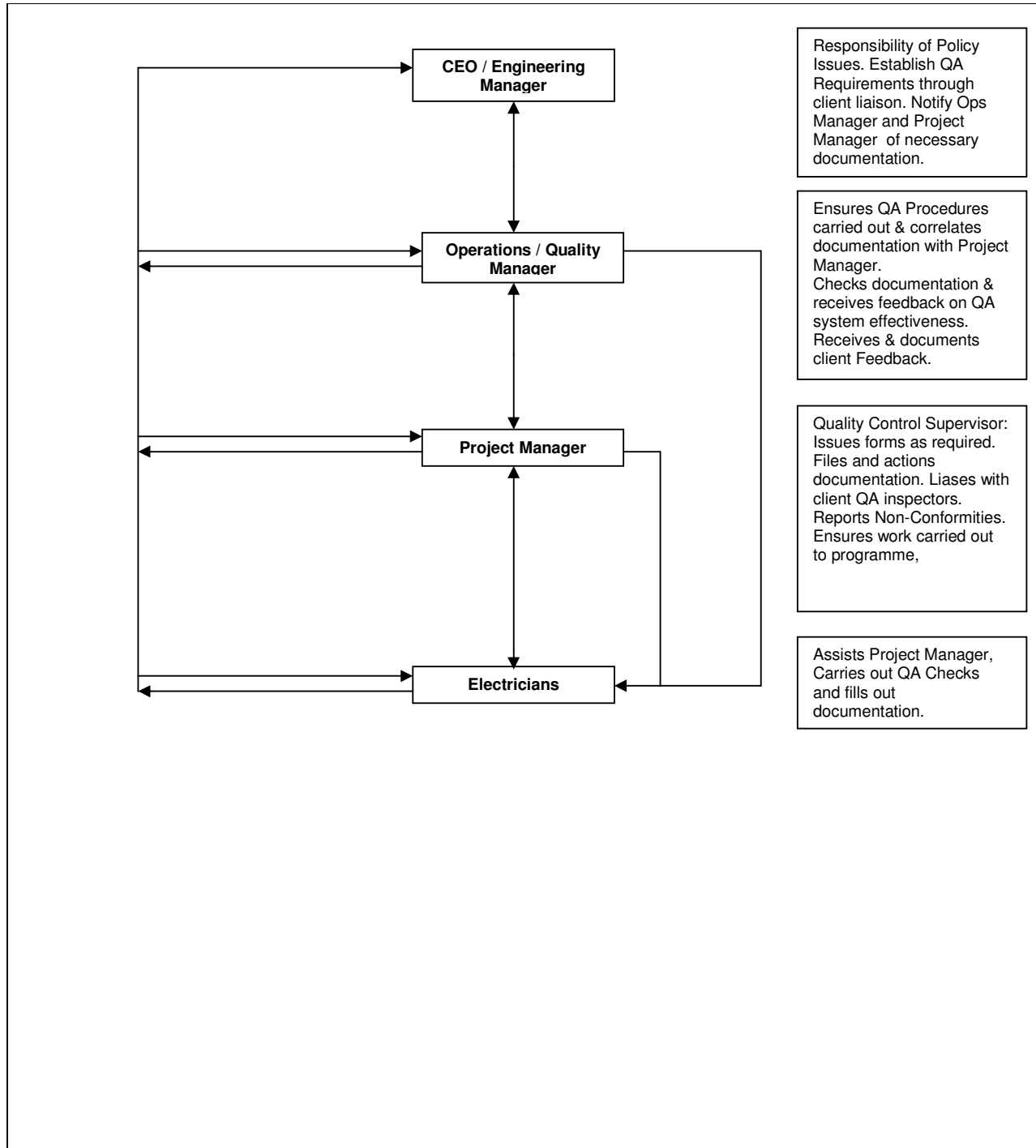
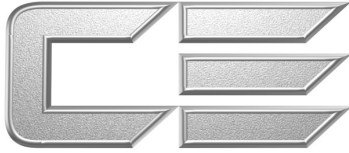


Figure: 2.0 Quality Assurance Responsibility chart:





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Section 3: Documentation:

3.0 Major Bid Documents:

- Bid documents shall be prepared by the estimator in conjunction with the engineering manager and CEO, matters of shop capability, staffing, programme timing and other work commitments are to be brought to the attention of the operations manager before the submission of the bid documents. The CEO and engineering manager are to be briefed regularly by the operations manager on current workshop programme commitments and requirements.

Bid documents once submitted are to be filed according to company's quote filing procedures (**Ref Section 3.4**) and recorded on the company database.

All bid documents are to be submitted under an authorised signature by the CEO and are to contain where appropriate the company's following documentation.

1. Current health & Safety policy containing Statement of site safe registration & participation.
2. Copy of QA Manual, or at a minimum company's Quality Policy.

3.1 Awarded Contract Documents:

- All contract documents are to be reviewed by the estimator, any items in the contract containing variations to the original tender documents are to be noted and brought to the attention of the client.
- Once the contract is awarded and Job sheet opened, **Project Summary Form 01A (Ref Appendix A)** is to be completed, labour requirements section filled in by operations manager and a handover to relevant project manager / foreperson carried out by the estimator detailing all aspects of the contract.

3.2 Contract Drawings:

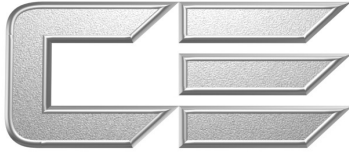
- A register of all received drawings will be kept for each project (**Project Summary Form 01A**) and duplicates produced for manufacture from drawings clearly labelled 'for construction / manufacture'. The register will state the drawing number, revision number, short title and date received. All **drawing revisions** received shall be acknowledged in the drawing register by name and signature of the recipient. Old revisions are to be marked and removed from circulation and all **superseded drawings** are to be immediately cancelled and removed from circulation. At the end of each contract a set of drawings is to be red pen marked up to be returned to the office to allow As Built Drawings to be completed

3.3 Company Engineering Drawings:

- Should the company be required to produce electrical line / loop detail or layout drawings, these drawings will conform to **NZS/AS 1102.107** drawing standards unless otherwise specified in contract notes, or upon agreement with the client. The drawings must be added to the drawing register (**Project Summary Form 01A**)
On completion of drafting, all drawings shall be issued to the client and receipt of drawings by the client shall be kept as a matter of record. Manufacture of any item from company drawings and subsequent drawing revisions is not to commence until **client approval is received**.

3.4 Documentation storage:

- All documentation is to be clear, legible, labelled and stored according to company documentation methods.
Documentation & Quality Records will be retained as per Table below:

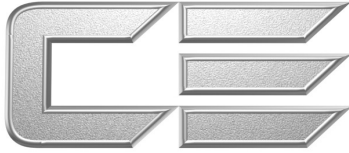


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Table 3.0

Documentation Retention Periods:

<u>Type of Record:</u>	<u>Retention Period:</u>
Quality System review, findings and corrective action.	3 Years
Personnel qualifications and certifications	Whilst employed + 1 Year
Equipment calibration certificates	Duration of Validity
Calibration records and data	Life of equipment + 1 Year
Tenders & Quotes: Contract not awarded to Company, documents archived.	Date of contract awarding + 1 Year
Project / Job completed (Archived) records	<p>All Records listed here are filed in project folders. Project Documentation is archived on contract / Job completion and retained for the Duration of project guarantee period + 3 years.</p> <p>Client will receive documentation on request.</p> <p>Archive period may be increased if required by Client / Company.</p>
Quality Plans	
Drawings - Originals submitted to purchaser at contract conclusion if company supplied drawings.	
Reports of Non-Conformities during contract period.	
Project QA Records	
Equipment & Material Certification –Test certificates if requested in contract or Drawing specifications.	
Manufacturers Data reports – originals submitted to purchaser	
Commissioning Test Sheets	



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Section 4: Goods Acquisition & Processing:

4.0 Purchasing:

- All goods shall be allocated to a specific job by purchasing, storing and processing under the one works number. This number is to be prefixed with the number unique to each staff member. Quality checks of supplied products will be undertaken by the purchaser or receiver and recorded as part of the standard company purchase order form. Any defects or problems are to be documented and reported to the project manager.

4.1 Specification:

- All materials / components purchased must comply with the specification and schedules.

4.2 Materials & services supplied by client:

- As agreed in the contract documents, the client may provide certain goods and services, including such items as proprietary components, specialised equipment and fittings and testing facilities.

4.2.1 Materials Supplied:

- In the event of incoming materials being damaged or in the opinion of the project manager unsuitable for use in the works, the purchaser is to fill out a **Non-Conformity Report 05MS** and client is to be notified and supplied with a copy of the report.

4.2.2 Services Supplied:

- The company can accept no responsibility for, nor assume liability for, any services supplied by the client, or carried out by the client, or any of the client's contractors. The project manager or site manager will undertake to give written notice to the client if, in his/her opinion, the services supplied are of a substandard quality or are not relevant to the work at hand.

4.3 Inspection by Client:

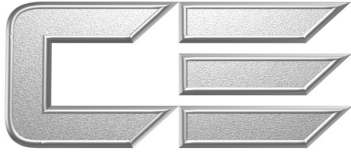
- The client's quality assurance inspectors shall have reasonable access to the works being undertaken by means of pre-determined appointments during normal working hours, provided there would be no compromise in company health & Safety policy for an inspection to take place.

The client is entitled to request changes in inspection intervals and procedures if required.

4.4 Procedure for Processing Inward Goods

4.4.1 Goods Received into our Store

- Ensure correct quantity of goods against packing slips.
- Ensure that packaging shows no signs of damage.
- If goods are in good condition store the goods as below.
- Should the state of the packaging indicate that damage may have occurred. Open packaging and inspect goods. If goods OK repackage and store as below. If damaged follow the damaged goods procedure.
- When goods are accepted into the store. Write your name on the packing slip to confirm all goods are in good condition and supplied, then place the packing slip into the Goods Received Tray in the store.



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4.4.2 Damaged or incorrect goods

- In the event of incoming goods being damaged or in the opinion of the project manager unsuitable for use in the works, fill out and action a **Non-Conformity Report 05MS**.

4.4.3 Goods being held in our store for contracts

- Locate a suitable space in our store, free from traffic and items that may cause damage when moved, eg large cable drums, cable ladder etc.
- Clearly mark the area to indicate the goods belong to the Client. Show the clients name and a description of the contract.
- Move all goods related to the contract into this area.
- Fill in Form 06A with a description of the goods, the supplier, our purchase order number and the date. Keep a copy of this form with the goods and ensure the copy kept in the Project Documentation folder is updated.
- When goods are despatched to site enter the date at the bottom of Form 04A. Send a copy with the goods and update the copy held by the office administrator.

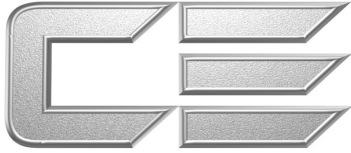
4.4.4 General Goods

- Materials that are for general sites or that are required on site straight away are kept in the general store. Receive the goods into the store and notify the site foreperson that the goods are available.

4.4.5 Goods received / held on site

When goods are received;

- Ensure the quantities, match the delivery documentation.
- Using the project schedules ensure that all instrumentation is ranged and rated correctly, has the correct process connections and is suitable for the installation. If any equipment is unsuitable, immediately inform the project manager so that the goods can be replaced.
- Remove all documentation from instrumentation and control equipment, including calibration certificates, and safely store. When all of the documentation has been collated keep 1 manual of each item and return the balance of the paperwork to the office for collation into manuals
- Keep all instrumentation in an area where it is dry and they will not be damaged or stolen.
- Ensure all other goods are stored in a manner to ensure that no damage or loss will occur.
- Should any goods be damaged especially delicate goods such as instrumentation, immediately inform the project manager so that the goods can be replaced.



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Section 5: site Quality procedures:

- All site managers will ensure that the company's quality assurance procedures are applied to all company site activities this includes employed sub-contractors. The site manager is responsible for the notifying onsite sub-contractors with regards to company and client...
 - Health & safety policy's
 - Operational procedures and associated paperwork.
 - Quality control procedures and associated paperwork.

The site manager will keep a register of all incoming and out going goods by item and when delivered position onsite, and also hold a register of all company equipment held.

See **Appendix A** for site quality control forms.

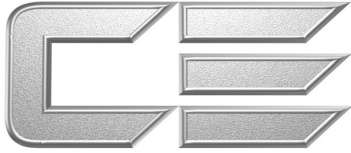
Note: All site works are company's direct 'front' to the public and client, every effort is to be made onsite to conform to and provide all client requirements in a professional, safe and timely manner.

Section 6: Validity of manual:

The procedures and processes outlined in this manual are part of the company's quality assurance methods, and will be adhered to by the company in so far as these procedures and processes form part of a contract between the company and client. These shall be applicable over the duration of the contract and works carried out during maintenance and or guarantee periods.

Signed:

Michael N Mackinnon
Chief Executive Officer.
Current Electrical 2000 Ltd.



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Appendix A:

Project summary Form: Form 01A

- This form is to be fully completed on award of contract by estimator and handed to operations manager for project schedule and labour requirements. The form is then to be placed in project documentation folder for reference. (Drawing register).
- A copy is to be given to the relevant foreperson and project manager on project handover.

Note: As much detail as possible is to be given in this summary to inform the respective forepersons of necessary contract details, and to assist in manufacturing with the simplest and best possible methods. All issued drawings reviewed by the project manager / estimator are to have important drawing notes and comments highlighted to ensure they are not missed during purchasing and fabrication.

If more detail is available in the form of schedules, the quotation etc, then those documents may be used instead of the forms.

Drawing Register: Form 02A

- This form is to be utilised with all jobs that have drawings supplied by either the client, or in house by CE. If a schedule has been produced as a transmittal form, then that transmittal may be used instead of the form.

Quotation Form: Form 03A

- This form is to be utilised with small to medium job quotations, for major job bids quotation sheets will vary with bid details, in which case a custom word document will need to be created.

Important Note:

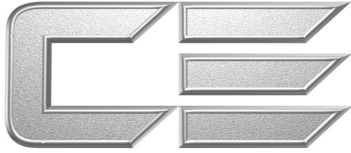
With the quotation form it is imperative that all job details are outlined, as this document will be a referral for the company should any discrepancies with client occur, if necessary add additional documents to the quote form. When the contract is awarded ensure the client signature is obtained on the quote document or if unable, ask for a fax with client conformation of agreement to contract. At a minimum date and sign when verbal agreement over phone with client to contract occurs.

Goods Held in our store: Form 04A

- This form is used to record all goods which will be paid for by the client and then held in our store.
- Keep a copy of the form with the goods and ensure a copy is then placed in project documentation folder for reference.
- A copy is to be given to the relevant foreperson and project manager on delivery of goods to site.

Quality Non-conformity report: Form 05MS

- This form is a multi use form, it is to be filled out and submitted to the project manager and quality manager when the following occurs...
1. Disagree with or would like to see an alteration to current quality assurance procedures.
 2. Fault in company works occurs either, drawings incorrect, specification or drawings that cannot be followed for Health and Safety reasons or non compliance with regulations.
 3. Fault with goods or incorrect item supplied and or problem with information with delivery docket.
 4. Fault with client supplied goods, copy is to given to client ASAP.
 5. Fault with subcontractor works. Project manager / Site manager to be notified immediately.



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Form 01A

Project Summary:

Job Number:

Contract Price:

Job (Labour) Hours:

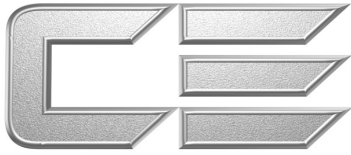
Current Date:

Required Delivery Date:

Recommended labour Commitment (OPS MAN):

Client Details:

General Project Description: (Include Site Requirements):



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Goods held in our store:

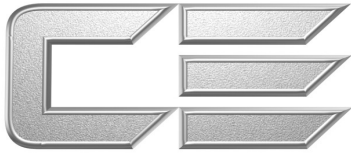
Form 04A

CLIENTS NAME _____.

CONTRACT DESCRIPTION _____.

Tag #	Description of Goods	Supplier	PO Number	Delivery Date

Despatch Date _____



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Form 05MS

Quality Non-Conformity Report:

<u>Job Number:</u>	<u>Client/Project/Supplier:</u>
<u>Dwg / PO Number:</u>	<u>Sheet Number:</u>

Non-Conformity Item / Description of problem:

Suspected reason for fault / error:

Corrective Action Undertaken:

Suggested method to prevent Reoccurrence:

Name / Signature/Date:

Signature of Quality Manager:

Signature of Project Engineer: