

Quality Assurance (QA) Manual For MCS Certified PV Installers

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Quality Management Statement

Your Company Name is committed to providing high quality products, effective project management and outstanding customer service.

Our Solar PV Installations will be designed and built to meet the agreed specifications.

This includes ensuring that we meet and exceed our MCS and HIES regulations and standards.

Your Company Name operates a quality management system (Hollycroft Software QA Manual) to ensure that we deliver consistent high quality. The QA Manual encompasses a series of quality control documents which will ensure that the delivered product and service meets our quality standards.

Your Company Name take full responsibility for ensuring effective quality management on all its Solar Installation Projects.

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PR 1.0 RECORDS MANAGEMENT PROCEDURE

1.1 Internal Documents procedure

Our company uses the Hollycroft Software Limited Quality Assurance Manual for recording and storing documents and records according to MCS standards.

Our company procedures are recorded in this document and each procedure is numbered and preceded with PR.¹

Our procedures may be updated (and added to) subject to internal review to adopt required or recommended changes to methods and operations.

The changes may be due to revisions in the standards, recommended preventative measures, or improvements in operations prompted by experience. In this way the company will be able to constantly improve the quality of its service as a by-product of the day to day running of the company.

1.2 Internal Documents

The QA manual provides a sub set of documents for recording lists or registers of required information. These documents are numbered and preceded with L, and are listed below:

ID	Title	Pages	Rev	Authorised by	Issued to
L01	Review of Company Roles and Responsibilities	1	1.0		All staff
L02	Instrument Calibration Register	1	1.0		All staff
L03	Staff Training Register	1	1.0		All staff
L04	Manufacturer Document List	1	1.0		All staff
L05	Required Guides and Standards List	3	1.0		All staff
L06	Approved Suppliers Register	1	1.0		All staff
L07	Non-Conformity Register	1	1.0		All staff
L08	Customer Complaints Register	1	1.0		All staff
L09	Job List	1	1.0		All staff
L10	Purchase Order list	1	1.0		All staff
L11	Sub-Contractor List	1	1.0		All staff
L12	Diary of Internal Review Meetings	1	1.0		All staff

¹ Note: If reading this document on computer, Microsoft Word's FIND menu option will allow for quick searches of this document for particular words or phrases.

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All the above lists are stored in Microsoft Word format (or Excel for L03) on our secure [Dropbox online storage service in /solar pv/QA System/Registers](#)

Note: Please amend above storage option as required.

The QA manual also provides a subset of record sheets that integrate with the above lists/registers to provide more detailed information on occurrences, events and required data. These documents are numbered and preceded with R, and are listed below:

ID	Title	Pages	Rev	Authorised by	Issued to
R01	Job Sheet	1	1.0		All staff
R02	Variation to Project	1	1.0		All staff
R03	Sub-Contractor Record	1	1.0		All staff
R04	Meeting Minutes	1	1.0		All staff
R05	Formal Sub-Contract Agreement	1	1.0		All staff
R06	Customer Complaints Record sheet	1	1.0		All staff

All the above lists are stored in Microsoft Word format on our secure [Dropbox online storage service in /solar pv/QA System/Records](#)

Note: Please amend above storage option as required.

1.3 External Documents

The QA manual contains a range of forms that may be made available to the client on request or that will be supplied as a part of the quote, design and/or handover process. These documents, numbered and preceded with F, are listed below:

ID	Title	Pages	Rev	Authorised by	Issued to
F01	Renewable Energy System Enquiry Form	1	1		All staff
F02	Solar Survey Form	2	1		All staff
F03	Solar PV Calculator	1	1		All staff
F04	Customer Order Quotation	2	1		All staff
F05	Feed-in Tariff Table	1	1		All staff
F06	PV Model Design Sheet	1	1		All staff
F07	Solar Schematic Tool	1	1		All staff
F08	PV Array Test Result Form	1	1		All staff
F09	PV Installation Check List	1	1		All staff
F10	PV System Verification Form	1	1		All staff
F11	Customer Hand Over Certificate	1	1		All staff

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F12	SSEG Installation Commissioning Confirmation Form	1	1		All staff
F13	Hand over pack - Word 2003 Version	15	1		All staff
F14	Hand over pack - Word 2007 / 2010 Version	15	1		All staff

All the above lists are stored in Microsoft Word and Excel format on our secure [Dropbox online storage service in /solar pv/Contracts/Customer postcode surname](#)

Note: Please amend above storage option as required.

All of the QA manual documents are designed wherever possible to be inclusive of BS, ECA and MCS information, records and data requirements. All staff will endeavour to complete every field on each list, record and form where applicable.

All relevant documents will be updated on a day to day basis when required.

1.4 Controlling Revisions

Any changes to the electronic version of the QA manual or accompanying lists, records and forms, will require that the revision date and version number be amended in the master document and previous versions be removed from the master folder to a backup folder.

1.5 Storage and Backup of QA, QA Registers and QA Records

All QA records will be stored electronically on local PC/Server and backed up a minimum of every 7 days to a cloud based system or other offsite storage.

Records will be held electronically for a minimum of 10 years.

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PR 2.0 RECORDS AND DOCUMENT BACKUP PROCEDURE

2.1 Records

The company will maintain an paper based file for each installation.

A contract file will include:

- a) Survey Form
- b) Testing Form(s)
- c) Commissioning form(s)
- d) Purchase invoices
- e) Sales invoice
- f) Contract documents
- g) Warranties
- h) Manufacturer manuals (or reference to electronic copies)
- i) Job sheets
- j) Calculations
- k) Quotation
- l) BS7671 certificate
- m) Servicing recommendations
- n) Any other relevant hand over pack information.
- o) Records identifying the individuals involved with the installation as defined in MCS 025

The company will keep records related to installation and inspection for seven years, from final completion of installation.

2.2 Document Backup

The company will ensure that all data is backed up off site to avoid data loss by fire, theft or system failure.

- a) Paper records will be kept of all installations.
- b) Electronic copies of records will be stored on the company's main PC/server.
- c) Electronic copies of records will be backed up to a cloud based system at a minimum of every 7 days.

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PR 3.0 CORRECTIVE AND PREVENTATIVE ACTION AND INTERNAL REVIEW PROCEDURE

Internal Review meetings are to be held every quarter and may be held sooner if required.

Our document **R04 Meeting Minutes** will be used to record all points raised at the meetings. This document conforms to MCS001 and specifies review criteria to be followed.

The following up to date registers and lists will be made available at all meetings and discussed:

- a) R01 Review of Company Roles & Responsibilities
- b) L06 Approved Suppliers Register
- c) L04 Manufacturer Document List
- d) L05 Required Guides and Standards
- e) L02 Instrument Calibration Register
- f) L08 Customer Complaints Register
- g) R01 Job List
- h) L07 Non-Conformity Register
- i) L11 Sub-Contractor list
- j) L03 Staff Training Register

Where corrective and preventative action is required, this will be noted in the Meeting Minutes together with any proposed closure dates. The initials of the assigned member of staff will be entered in to the Action by column.

The Nominee will report on any changes to the standard and an action plan for any changes put into place.

Absences and apologies must be noted. Any member of staff unable to attend will be able to email or call in with points for discussion at the review meeting.

Copies of the updated minutes will be forwarded to all staff present, or those intending to attend.

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Where required, preventative actions will be emailed or issued to all relevant staff.

3.1 Feedback

Any email, written or verbal feedback from customers, employees, subcontractors or suppliers will be forwarded to the Nominee to be reviewed at the quarterly Review meetings.

The Nominee will decide if actions required to resolve any issues highlighted in any feedback are urgent and require immediate attention.

Note: PR 19.0 CUSTOMER COMPLAINTS PROCEDURE

PR 3.0 CORRECTIVE AND PREVENTATIVE ACTION AND INTERNAL REVIEW PROCEDURE

PR 8.0 NON-CONFORMITY PROCEDURE

3.2 Nominated Technical Person(s)

The MCS installation company must have in place with the Nominated Technical Person(s) a contract or agreement that clearly details the amount of time they are engaged with the company on a monthly basis. The agreement will clearly state the geographic location(s), duration, start dates and their duties.

If the Nominated Technical Person(s) is/are sub-contracted to work for the company they will be required to spend an “appropriate” amount of time working for the company. This will be proportionate to the number of installers and installations being conducted by the company.

Fig 001 is a guide of appropriate timescales.

Fig 001

	Average Per Month		
	<5	5-10	>10
IF: No. of Installations	<5	5-10	>10
AND/OR: No. of Installers	1	2-5	>5
THEN: No of days worked by each Nominated Technical Person	4	5-15	>15

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PR 4.0 INSTRUMENT MAINTENANCE AND CALIBRATION

All instruments and equipment requiring regular maintenance and calibration in accordance with legislation, the standard or manufacturer guidance will be entered onto document **L02 Instrument Calibration Register**.

Instrument serial numbers will be recorded, or a specific record number will be attached, so that each instrument can be recognised for calibration and maintenance purposes.

The designated member of staff will ensure all instruments and equipment requiring calibration and maintenance are serviced at the required intervals by the approved servicing centres and the service details logged on document **L02 Instrument Calibration Register**.

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The remaining 29 pages of the HIES Quality Assurance Manual are available in the full version of the software.