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SERVICE PENETRATION AND CONTROL JOINT FIRE PROTECTION SYSTEMS

1. SCOPE AND DEFINITIONS

1.1 Scope

1.1.1. This document sets out the general operating procedures and performance, quality assurance and training requirements for the Certifire Australia Scheme for service penetration and control joint protection systems.

1.1.2 Reference should also be made to the following Certifire Schedules:

- a) Certifire Australia procedures & regulations **CA001**
- b) Certifire Australia Quality Assessment Schedule (QAS) for Manufacturers/ Suppliers and Installers **CA002**

1.2 Definitions

Certifire Schedule - A document setting out requirements and procedures of the Certifire Australia Schemes.

Certifire Specification - A form of words for nominating the Certifire Schemes for building projects.

Certifire Scheme - A third party certification scheme for the purpose of listing suppliers and contractors which comply with the relevant Certifire Schedules.

B.C.A. - The current edition of the Building Code of Australia.

Appraisal - In the context of the Certifire Scheme an appraisal is an assessment of a system against the requirements of the appropriate Certifire Schedules.

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2. GENERAL OPERATING PROCEDURES

2.1 Introduction

2.1.1 The ability of fire protection systems to reinstate the Fire Resistance Level (FRL) of an element penetrated by services is dependent upon many factors. Typically these include variations in the components/materials of fire protection systems, variations in the penetrating services and separating elements and variations in installation methods.

- 2.1.2 The performance of a fire protection system for a control joint and for smoke stopping applications is dependent upon similar factors to those stated in 2.1.1.
- 2.1.3 The effectiveness of the systems can be reduced by inadequate durability, maintenance or the use of a system in unsuitable applications (e.g. rigid systems in applications which are subject to differential movement).
- 2.1.4 The objective of the Certifire Australia Scheme is to increase the likelihood that service penetration and control joint fire protection systems when installed in buildings would be capable of achieving nominated FRLs. This is to be achieved through:
- a) the independent appraisal of products in a consistent manner against clearly defined performance requirements
 - b) the appraisal of the competency and capability of fire protection contractors to install fire stopping systems correctly against documented standards
 - c) the definition of minimum quality assurance requirements for product suppliers and fire protection contractors, and independent auditing of companies to monitor on-going compliance with these requirements
 - d) the preparation of certificates defining the performance of fire protection systems or the capabilities of fire protection contractors in a consistent manner
 - e) clear unambiguous labelling requirements for systems supplied and installed in accordance with the scheme
- 2.1.5 It is recognised that the size and type of project and geographic location of a site can influence the selection of an appropriate Certifire specification.
- 2.1.6 For most major building projects in Australia the standard Certifire specification should be nominated which suggests that Certifire listed products be installed and maintained by contractors listed by Certifire or equivalent schemes. The Certifire Scheme covers the supply and installation phases in an accountable and cost-effective manner, and enables the installation to carry a Certifire label. An example of the Certifire label for penetration seals is shown in Appendix 1.
- 2.1.7 Other options under the Certifire scheme are
1. product only certification, and
 2. independent site inspection.

It should be recognised that product only certification does not provide any control over site installations and therefore should only be specified when installation by a Certifire contractor is impractical. Independent site inspection, if used in conjunction with a Certifire contractor, can provide additional control but also adds significantly to costs with only a marginal increase in quality control during the installation phase since an inspector will be unlikely to be on site at all times and cannot verify all details.

Independent site inspection will not be cost-effective for most applications. See Appendix 3 for examples of typical specifications for the Certifire Scheme.

2.1.8 The methods for appraisal of service penetration and control joint fire protection systems are given in section 3, the quality assurance level requirements for the manufacturers and suppliers of the systems are given in section 4, the competency/ training levels required for key personnel of a fire protection contracting organisation installing and maintaining service penetration and control joint fire protection systems are given in section 5, and the quality assessment requirements for these fire protection contractors are given in section 6.

2.2 Compliance with Building Regulations

2.2.1 It is the intention that the Certifire scheme will complement relevant building regulations by ensuring systems are in place to demonstrate compliance with relevant regulations.

2.2.2 The BCA allows building solutions which either comply with the deemed-to-satisfy provisions, are equivalent to the deemed-to-satisfy provisions, or comply with the nominated performance requirements.

The deemed-to-satisfy provisions prescribe, among other things, fire resistance levels (FRLs) and smoke resistance properties required by certain construction elements in buildings. Certifire certificates can be used to check compliance with those provisions. However, when a building solution is to be assessed for either equivalence to the deemed-to-satisfy provisions or for compliance with the performance requirements, data from Certifire certificates will need to be considered on a case-by-case basis.

2.2.3 If the building regulations and Certifire scheme documents conflict, the building regulations must take priority but the manufacturer or fire protection contractor must notify Certifire in writing of any variations from the scope of their certification required by the regulations.

2.2.4 In some instances the regulatory authority having jurisdiction may permit the installation of systems which lie outside the scope of the current Certifire listing. Under these circumstances the contractor:

- a) must not attach a Certifire label, **or**
- b) if a Certifire label is to be applied, supply written proof to Certifire from the relevant regulatory authorities that the installation is 'approved' together with an appropriate fee to Certifire. Certifire will then maintain a file on the project so that any queries in the future can be answered.

2.3 Labelling and Log Books

2.3.1 The use of Certifire labels is strictly controlled to enable the status of an installation to be clearly identified.

2.3.2 The packaging of component parts and materials that form part of a Certifire listed system can incorporate the Certifire logo as indicated in Appendix 1 providing the scope of the appropriate Certifire certificates is clearly defined in the instructions supplied. The components of a system cannot be labelled prior to installation.

2.3.3 An installation can be labelled with a Certifire label if the installation complies with a current Certifire certificate and it has been installed by a Certifire listed fire protection contractor within the scope of the contractor's certification.

2.3.4 The Certifire labels are available from Certifire Pty. Ltd. in numbered batches. The Fire Protection Contractor shall keep a register of the location of all Certifire labels that have been attached to installations

2.3.5 A log book listing all protected penetrations must be supplied by the fire protection contractor to the building owner or representative. A copy must be retained by the fire protection contractor for a minimum of ten years. The log book shall include all details required by AS4072.1 together with a listing of all Certifire labels applied to the relevant Certifire Product Certificates.

2.3.6 Copies of the Certifire Schedules and certificates relevant to the installation shall be attached to the log book. Members of the Certifire Scheme are granted permission to copy Certifire schedules specifically for this purpose.

3. CERTIFIRE REQUIREMENTS FOR SERVICE PENETRATION AND CONTROL JOINT FIRE PROTECTION SYSTEMS

3.1 Building Regulations and Standards

3.1.1 Service penetrations are to be appraised against the requirements of the current Australian Building Regulations as defined in the BCA and AS4072.1-2005 Components for the protection of openings in fire-resistant separating elements. Part 1: service penetrations and control joints.

3.1.2 However the current edition of the BCA includes the following notes;

- In Regard to AS4072 - Systems tested to AS 1530.4 prior to 1 January 1995 need not be retested to comply with the provisions in AS 4072.1.
- In Regard to AS1530.4 - Subject to the note to AS 4072.1, reports relating to tests carried out under earlier editions of AS 1530 Parts 1 to 4 remain valid. Reports relating to tests carried out after the date of an amendment to a Standard must relate to the amended Standard.

3.1.3 The BCA Clause C3.16 requires that openings for service installations;

Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other service penetrates a building element (other than an external wall or roof) that is required to have an FRL with respect to integrity or insulation or a resistance to the incipient spread of fire, that installation must comply with one of the following:

- (a) The method and materials used are identical with a prototype assembly of the service and building element which has been tested in accordance with AS 4072.1 and AS 1530.4 and has achieved the required FRL or resistance to the incipient spread of fire.
- (b) It complies with (a) except for the insulation criteria relating to the service if—
 - (i) the service is protected so that combustible material cannot be located within 100 mm of it; and
 - (ii) it is not located in a required exit.
- (c) In the case of ventilating or air-conditioning ducts or equipment, the installation is in accordance with AS/NZS 1668.1.
- (d) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like) and is installed in accordance with Specification C3.15 and it—
 - (i) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and
 - (ii) connects not more than 2 fire compartments in addition to any fire-resisting service shafts; and
 - (iii) does not contain a flammable or combustible liquid or gas.

- (e) The service is sanitary plumbing installed in accordance with Specification C3.15 and it—
 - (i) is of metal or UPVC pipe; and
 - (ii) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and
 - (iii) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification C1.1 for a stair shaft in the building and a self-closing –/60/30 fire door.
 - (f) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it—
 - (i) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and
 - (ii) connects not more than 2 fire compartments in addition to any fire-resisting service shafts.
 - (g) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.
- 3.1.4 The BCA Clause C3.16 requires construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.
- 3.1.5 This requirement is deemed to be satisfied by systems identical to a prototype tested in accordance with AS1530.4 (and AS4072.1 1992 if appropriate) which achieved the required FRLs.
- 3.1.7 AS4072.1-2005 provides additional guidance on suitable test configurations, test procedures and methods to appraise test results which must form the basis of a Certifire appraisal of control joints.

3.2 Fire Testing

- 3.2.1 There is no fixed programme of tests specified due to the wide range of applications and differing performance expected from service penetration and control joint protection systems.
- 3.2.2 The fire test programme for a system should establish the suitability of the basic system for its intended use and provide data for the assessment of variations from the tested prototype.

Systems based on tested prototypes

- 3.2.3 Appraisals will be based on information derived from tests carried out in accordance with the heating conditions of AS1530.4.
- 3.2.4 The appraisals will be based on test data from a testing authority registered by the National Association of Testing Authorities (NATA) to test in the relevant field
 - or
 - an organisation outside Australia recognized by NATA through a mutual recognition agreement
 - or
 - other organisations defined as Registered Testing Authorities in the BCA.
- 3.2.5 AS4072.1 includes requirements and guidance which should be considered in defining a suitable test programme for a system.

3.2.6 The performance of control joint systems and penetration systems can be affected by the separating element. Test evidence as required in AS4072.1 will be required to demonstrate compatibility with differing operating elements.

3.2.7 The performance of a penetration protection system can be critically affected by the services. Test evidence as required in AS4072.1 will be required to demonstrate compatibility with different penetrating services.

It is strongly recommended that wherever possible, the standard configurations specified in AS4072.1 be adopted.

3.2.8 Fire tests carried out to standards other than the current edition of AS1530.4 will only be used if confirmatory data (an opinion from a registered testing authority) is available to demonstrate the continued applicability of the data and if the test methodology is sufficiently similar to that specified in the current edition of AS1530.4.

Note: It is not the intention that all tests are required to be repeated as new editions of AS1530.4 are released. In many cases it may be acceptable for evidence from tests used to extend the range of application to also provide confirmatory data. It is important that Certifire is notified during the planning stages of such a test to ensure the test data will be acceptable. Where significant changes to a test methodology occur which necessitate further testing of existing Certifire systems a 'grace period' of 12 months will be permitted which will only be extended if further delays are justifiable. The 'grace period' does not apply to systems which have been demonstrated not to comply with the current Certifire specifications.

Systems based on specification C3.15 of the BCA

3.2.9 The fire stopping system shall:

- a) have been subjected to a fire resistance test in accordance with AS1530.4 and have demonstrated that it does not impair the fire resisting performance of the building element in which it is installed, **or**
- b) have been subjected to the test described in specification C3.15 (e) of the BCA, **and**

when subjected to a test in accordance with AS1038.15 be shown not to flow at a temperature below 1120°C.

3.3 Variations from the Tested Prototype

3.3.1 The appraisal will define the field of application for the system based on a prototype test, and

- a) assessments/opinions issued by a registered testing authority complying with the technical requirements of AS1530.4 and AS4072 as appropriate
- b) documentation of the acceptable variations nominated by AS1530.4 which do not require assessments from a registered authority.

3.3.2 The certificate will list all test data and assessments which were used in the appraisal.

3.3.3 A Certifire label/mark must not be applied to any system which does not comply with the requirements of a current Certifire certificate unless written proof from the relevant regulatory authorities that the installation is approved is lodged with Certifire together with a lodgement fee and the system is installed by a Certifire listed fire protection contractor.

Certifire will then maintain a file on the project for a minimum of ten years so that any queries in the future can be answered.

3.4. Appraisals

- 3.4.1 Three alternative methods are available for the preparation of an appraisal for each system. These are given in clauses 5.2 to 5.4.
- 3.4.2 The simplest appraisal will be that of a single system without variations based on one fire test. The test data, and a specification of the test assembly, manufacturers installation instructions, and physical test data if appropriate is submitted to Certifire for appraisal and preparation of a certificate.
- 3.4.3 A manufacturer may submit a range of tests and opinions/assessments for variations from the tested prototype from registered testing authorities meeting the requirements of this schedule. The assessments/opinions must comply with the technical requirements of AS4072.1.
- In addition, drawings and specifications of the prototypes and variations together with manufacturer's installation instructions must be submitted with supplementary test data if appropriate (e.g. elasticity tests).
- Certifire will then prepare an appraisal and certificate for each system.
- 3.4.4 A manufacturer may obtain an appraisal against the relevant Certifire standards by a registered testing authority as defined in clause 3.2 of this schedule. The appraisal, together with all supporting data, must be submitted for review by Certifire and a certificate for each system issued.

3.5 Serviceability

- 3.5.1 The certificate shall include data on the durability/serviceability of a system.
- As a minimum this shall include:
- a) resistance to water
 - b) flexibility
- The certificate shall describe the test methods used and report results obtained.
- If no data is available the certificate shall state, for example, "No data is available under the category of resistance to water and flexibility".
- 3.5.2 The flexibility of a seal can be ascertained by the method described in Appendix C of AS4072.1 or a similar method.
- 3.5.3 A statement will be included on each certificate that the system should be selected to suit the particular environment or application.

4. CERTIFIRE QUALITY ASSURANCE REQUIREMENTS FOR MANUFACTURE AND SUPPLY OF SERVICE PENETRATION AND CONTROL JOINT FIRE PROTECTION SYSTEMS

4.1 General Requirements

- 4.1.1 In addition to the requirements of this schedule, the Manufacturer must operate a quality system which complies with either:
- a) AS/NZS/ISO9000.2006 or
 - b) Certifire - Quality Assessment Schedule CA002

Note: It will eventually become a requirement for all manufacturers to comply with AS/NZS/ISO9000.2006 and the Certifire Quality Assessment schedule will be phased out. The time of the phase out will be determined by the relevant sub-committee and Certifire Advisory Panel.

4.1.2 The quality system will be initially audited by Certifire. Annual audits are to be carried out by Certifire or by a JASANZ accredited independent organisation that will exchange information with Certifire where an AS3902 quality system is in operation.

4.1.3 Additional audits required to investigate complaints against a manufacturer are to be carried out by Certifire.

4.2 Specific Requirements for Control Joints and Service Penetrations.

General

4.2.1 A quality system for a manufacturer or supplier of service penetration and control joint materials and components must specifically address the requirements given in the remainder of this section.

4.2.2 The materials and components that are supplied as fire protection systems for control joints and penetration systems are diverse and include but are not limited to:

- one-part gun applied flexible mastics
- two-part mastics-mixed on site
- cementitious mixtures
- intumescent strips
- mineral fibre batts
- assemblies such as sleeves/collars
- compressible foams
- pillows
- blocks

4.2.3 In some applications the installation may be simple, e.g. a canister cast into a concrete slab while other systems may be complex requiring a number of components to be assembled on site.

4.2.4 Because of the diversity described above the requirements of this section are provided in general terms.

Specifications and instructions for manufacture

4.2.5 The quality system shall include documented specifications and manufacturing instructions for each type of component and assembly.

4.2.6 These specifications must be clearly referenced to:

- a) the tested prototype, and
- b) where relevant any permissible variations supported by assessments from registered testing authorities, and
- c) the Certifire certificate

4.2.7 The specification must accurately describe:

- a) all materials used in the manufacture of a component material or assembly including tolerances, source and any performance requirements
- b) ordering details
- c) methods of storage
- d) tests and inspections and procedures in case of non-compliance

- 4.2.8 It is preferred that all materials and components are supplied and manufactured by companies under third party quality assurance schemes. However it is realised that in many instances this may be impractical. Under these circumstances greater emphasis shall be placed on sampling and testing materials.

Manufacture by third parties

- 4.2.9 Many systems are manufactured from materials whose properties may vary considerably and significantly affect the fire resistance performance of a system. It is therefore important that the Quality system monitors the sources and critical parameters of all materials to ensure that raw materials when compounded will meet fully the requirements of the performance specification of each product.
- 4.2.10 In some instances components may be delivered direct to site. Documented procedures shall be provided for the inspection under these circumstances.
This may be carried out by the installer.
- 4.2.11 The manufacturing instructions shall describe all processes in detail together with inspection procedures. Manufacturing tolerances must be specified together with corrective actions if appropriate and rejection criteria.

Record system

- 4.2.12 The quality system shall be such that each batch or unit is identified by a unique number. A record should be kept of the batch number of materials/ components supplied by third parties.
- 4.2.13 All material and components used in the manufacture of a batch and inspections and tests during manufacture shall be identified on a file relating to the batch. Where materials are manufactured by a third party to a specification, a certificate of conformance must be obtained and a sample of each batch should be checked and tested following documented procedures.
- 4.2.14 The file on each batch must be retained for a minimum of ten years and be readily identified from the batch numbers marked on the components.

Packaging and instruction

- 4.2.15 The product packaging must be clearly marked with the product designation, batch number and storage conditions. The Certifire mark may be included in accordance with section 2.3 of this document. Details of the packaging must be submitted to Certifire for approval.
- 4.2.16 Fully documented instructions for the correct installation and use of a product shall be included with each sale. These instructions must be submitted to Certifire and will be referenced in the Certifire certificate.
- 4.2.17 Certifire must be notified prior to any modifications of the packaging or installation instructions and details must be submitted to Certifire for verification prior to publication and that any modifications required by Certifire are incorporated.

Technical services

- 4.2.18 There shall be documented procedures for consulting with and providing advice to customers on the performance and appropriate use of products.
- 4.2.19 The documented procedures shall clearly define the minimum training/ competency level requirements for technical advisers and identify the staff members having satisfied these requirements.

Note: A technical adviser should be able to satisfy the competency levels nominated in Section 5 for an installation inspector.

5. COMPETENCY/TRAINING REQUIREMENTS FOR FIRE PROTECTION CONTRACTING ORGANISATION

5.1 General Requirements

- 5.1.1. This section defines the minimum training required by personnel involved in the installation and maintenance of service penetration and control joint fire protection systems.
- 5.1.2 Competency based training methods are adopted with provision to recognize prior learning.
- 5.1.3 Methods for the assessment of the competencies are given together with training requirements where appropriate. It should be noted that a level of competency can be attained by:
- a) prior knowledge
 - b) on-the-job training/in-house training
 - c) formal training seminars
 - d) a combination of any of the above

5.2 Key Personnel

- 5.2.1 The key personnel involved in the installation of service penetration and control joint fire protection systems are defined below:

The Project reviewer/estimator

- 5.2.2 The project reviewer/estimator may perform the following tasks:
- review the initial specifications/ drawings and where appropriate visit the site and identify required FRLs
 - select appropriate system(s) from test reports/Certifire certificates identifying critical details and any potential non compliances
 - check the proposed systems against the requirements of the BCA, AS4072.1, and the appropriate Certifire certificate taking appropriate actions if non compliances are identified
 - order materials and prepare work instructions

Installer

- 5.2.3 The installer may perform the following tasks:
- check materials are undamaged, perform any required tests and comply with the requirements of work instructions
 - install a system or carry out maintenance work recording batch numbers, carrying out tests/checks as appropriate and identify any variations from the work instructions

The Inspector

- 5.2.3 The inspector may perform the following tasks:
- supervise installation
 - check the final installation/carry out maintenance inspections
 - attach the Certifire mark
 - complete the log book

5.3 Competency Requirements and Assessment Criteria

5.3.1 The key personnel described in section 5.2 shall demonstrate to the satisfaction of Certifire their competency to perform the critical tasks listed below.

5.3.2 The methods of assessment to be adopted by Certifire are summarized below.

5.3.3 The project reviewer/estimator.

5.3.3.1 **Outcome 1:** Identify relevant requirements of the BCA, select the appropriate service penetration or control joint protection system from test reports/Certifire certificates, describe design requirements and check that the system is suitable for its application.

Assessment criterion:

- a) for a given application specify the FRLs required by the BCA
- b) identify relevant Certifire certificates and/or test data for suitable systems.
- c) list significant design requirements

5.3.3.2 **Outcome 2:** Compare a specification with the requirements of AS4072.1 and Certifire certificates, and identify non-compliances.

Assessment criterion:

- a) for a specification and nominated Certifire certificate list any AS4072.1 variations and non-compliances with the requirements of the BCA and AS4072.1

5.3.3.3 **Outcome 3:** Propose a suitable course of action for a specification which does not comply with the requirements of a Certifire certificate and/or AS4072.1.

Assessment criterion:

- a) for a non-compliant system, identify three alternative courses of action to provide an installation complying with the Certifire scheme, AS4072.1 and the Building Regulations

5.3.3.4 **Outcome 4:** Produce work instructions for the installer and/or orders for materials.

Assessment criterion:

- a) for a given application prepare work instructions or orders. (Note: Proforma forms can be used)
- b) prepare labelled sketches of typical installations

5.3.3.5 **Outcome 5:** Interpret engineering drawings and specifications.

Assessment criterion:

- a) from typical engineering drawings and specifications interpret the information available and identify a suitable system which complies with the requirements of the BCA and AS4072.1.

5.3.4 Inspector

5.3.4.1 **Outcome 1:** Identify relevant requirements of the BCA, AS4072.1 and Certifire certificates for an installation.

Assessment criterion:

- a) for a given installation, list the relevant requirements of the BCA, AS4072.1 and Certifire certificate applicable to the installation

5.3.4.2 **Outcome 2:** Identify common types of elements of construction services and control joints and protection systems within the scope of the certification-

Assessment criterion:

- a) describe common types of wall/ floor constructions nominating FRLs and identifying critical parameters (e.g. thickness, height, facing materials, etc)
- b) describe fire protection systems included under the Certifire schedule for the installation company
- c) prepare labelled sketches of typical installations
- d) describe methods for identification of systems prior to labelling

5.3.4.3 **Outcome 3:** Inspect installations for compliance with the Certifire certificate, AS4072.1 and evidence of deterioration.

Assessment criterion:

- a) for a typical installation carry out an inspection and provide a written statement identifying any non-compliances, etc.

5.3.4.4 **Outcome 4:** Propose a suitable course of action for an installation which does not comply with the Certifire certificate and/or AS4072.1 or the BCA.

Assessment criterion:

- a) for a non-compliant system identify suitable rectification works and describe how to implement the courses of action.

5.3.4.5 **Outcome 5:** Complete log book details.

Assessment criterion:

- a) for a typical project prepare a log book incorporating as a minimum the information given in AS4072.1. The log book must also have provision for recording maintenance inspections. Pro-forma sheets may be used.

5.3.5 Installer

5.3.5.1 **Outcome 1:** Interpret installation instructions.

5.3.5.2 **Outcome 2:** Perform an installation in accordance with instructions. Assessment criteria for Outcomes 1 and 2:

Based on written instructions, install a fire protection system following the instructions and the requirements of AS4072.1 and the Certifire certificate.

Note: Some installers may install only a limited range of systems. Under these circumstances, compliance with the competency standards need only be demonstrated for the relevant systems.

5.3.5.3 Identify variations from installation instructions, the requirements of AS4072.1 and the Certifire certificates, taking appropriate action.

Assessment criterion:

- a) for a given installation identify any variations from installation instructions and/or the requirements of AS4072.1 and Certifire certificates and describe suitable actions.

5.4 Assessment of Training and Competency

5.4.1 Evidence of the training and competency of key personnel shall be provided prior to the initial audit. This can take the form of examples of work, or results from assessments from training programmes. The roles of all members of staff must

be defined in a Quality Manual for the organisation together with training requirements.

- 5.4.2 The information will be reviewed by Certifire. The initial audit will assess the competency of key staff members, using the criteria given in section 3 of this schedule.
- 5.4.3 The audit will also assess the suitability of current training methods for the applicant company.

6. CERTIFIRE QUALITY ASSURANCE REQUIREMENTS FOR FIRE PROTECTION CONTRACTOR

6.1 General Requirements

6.1.1 The contractor must operate a quality system which complies with:

- a) AS3902 (ISO9002) or
- b) Certifire Quality Assessment schedule CA002

Note: It may become a requirement for all installers to comply with AS3902. The timing and decision to phase out the Certifire schedule CA002 will be determined by the relevant Certifire technical sub-committee and Certifire Advisory Panel.

- 6.1.2 The quality system will be initially audited by Certifire. Annual audits are to be carried out by Certifire or by a JASANZ accredited independent organisation that will exchange information with Certifire where an AS3902 quality system is in operation.
- 6.1.3 Additional audits required to investigate complaints against a manufacturer are to be carried out by Certifire.

6.2 Specific Requirements for the Installation of Service Penetration and Control Joint Fire Protection Systems

6.2.1 A quality system for an installation contractor must specifically address the requirements given in the remainder of this section.

Review of tender specifications, enquiries and orders

- 6.2.2 All tender documents and orders shall be reviewed by suitably trained and competent personnel for:
 - a) compliance with Certifire certificates relevant to the installation
 - b) compliance with the requirements of AS4072.1 and the BCA
 - c) the ability of the manufacturer to perform the work on time.
 - d) the suitability of a system for its particular application
- 6.2.3 The review should include but not necessarily be limited to checks on:
 - a) opening size (height, width and length as appropriate)
 - b) separating element type
 - c) services penetrating openings
 - d) clearances
 - e) FRL
 - f) loadbearing capacity
 - g) access
 - h) delivery date/availability of materials

i) the serviceability of the system

6.2.4 Written procedures for actions required if a non-compliance is identified shall be provided.

Specifications and instructions

6.2.5 The quality system shall include documented specifications for ordering materials/components, checks for compliance with the specifications, recording batch numbers, storage of materials, etc.

6.2.6 The quality system shall require that no claims in relation to Certifire or Certifire membership are made for the installation of systems which do not comply with the requirements of a current Certifire certificate. Documented procedures shall be included defining the use of the Certifire logo and claims of Certifire membership.

6.2.6 It is preferred that all components are supplied and manufactured by companies under third party quality assurance schemes. However it is realised that in many instances this may be impractical.

6.2.7 Under these circumstances greater emphasis shall be placed on inspection. Examples could be fixings used in conjunction with a system. Variations in the materials used for the fixings could affect the performance.

6.2.8 Documented procedures shall be provided for the inspection of components when delivered to site.

6.2.9 Documented procedures shall be provided for the installation and final inspection of the system and labelling.

6.2.10 Documented procedures shall define appropriate actions if non-compliances are identified.

Record system

6.2.11 The quality system shall be such that each project is identified by a unique number from receipt of an order through to installation and inspection and subsequent maintenance.

6.2.12 All component batches used in the installation phase shall be identified on a file relating to the project.

6.2.13 Details of all systems installed and subsequent maintenance shall be recorded in a log book and on the project file together with the number/ID of the Certifire labels fixed to each installation.

6.2.14 The file must be retained for a minimum of ten years and be readily identified from the project reference.

Maintenance requirements

6.2.15 All fire protection systems require ongoing maintenance and inspection to maintain their performance at a level close to that of the original installation. The integrity of a barrier system can be impaired by disruption of seals or barriers by the installation of new services or relocation of existing services. The log book shall identify the frequency and scope of inspections required and specify procedures for the notification of building works and immediate reinstatement of penetration fire protection systems.

6.2.16 The requirements for inspection/ maintenance will vary with the building use, type of system and state regulations. Notwithstanding the above all systems should be inspected annually to ensure the fire protection systems remain in tact, and records shall be kept of these inspections and any works undertaken.

APPENDIX 1

LABELLING AND USE OF THE CERTIFIRE LOGO

A1.1 General

In order for an installation to be labelled with a Certifire label the system must comply with a Certifire certificate which was current at the time of installation and be installed by a Certifire listed contractor within the scope of the contractor's Certifire certificate.

A1.2 Labelling format

Labelling shall be obtained from Certifire Pty. Ltd.

Example label for Certifire listed installers for use on penetration seals:

 <p>CERTIFIRE AUSTRALIA Tel: +61 3 9865 8644</p>	<p>Label Batch No. 001</p> <p>This label has been attached by the Installation contractor to certify that this fire protection system has been installed by a Certifire listed contractor in accordance with a current Certifire product certificate at the time of installation.</p> <p>See the Log Book for further details.</p> <p>Contractor: XYZ Pty. Ltd. Tel: (00) 1111 2222</p>
<p>Contact the building owners representative immediately if this system is damaged</p>	

Example label for Certifire listed installers for control joint systems:

 <p>CERTIFIRE AUSTRALIA Tel: +61 3 9865 8644</p>	<p>Label Batch No. 001</p> <p>This label has been attached by the Installation contractor to certify that the control joint fire protection systems in this area have been installed by a Certifire listed contractor in accordance with a current Certifire product certificate at the time of installation.</p> <p>See the Log Book for further details.</p> <p>Contractor: XYZ Pty. Ltd. Tel: (00) 1111 2222</p>
<p>Contact the building owners representative immediately if this system is damaged</p>	

The label size will be 100mm x 50mm

A1.3 Location

Where practicable for service penetrations the label shall be on or within 300mm of the penetration system.

For control joint systems the label shall be either:

- a) mounted in the foyer or other 'public' areas in the area protected by the system or
- b) mounted adjacent to manual call points if the positions are known, or
- c) adjacent to all fire exits from the area with control joints protected under the Certifire scheme

A1.4 Labelling methods

Certifire labels may be mechanically fixed or bonded in such a manner that accidental removal would be unlikely to occur.

A1.5 Packaging and Promotional literature

When a Certifire certificate has been issued to a company (manufacturer/supplier and installer) the company is entitled to use the Certifire mark shown below on packaging and/or promotional literature provided:

- a) the company may only use the mark or claim or imply certification in respect of products or services complying with the relevant performance, training and quality assessment schedules within the scope and limitations given in the certificate(s).
- b) copies of all material containing reference to certification and Certifire are submitted to Certifire for verification prior to publication and that any modifications required by Certifire are incorporated.