Defect Free construction in NSW
How it can be achieved

By Engineers Australia Multi-Disciplinary Committee

ENGINEERS AUSTRALIA

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MULTI-DISCIPLINARY COMMITTEE

SUMMARY OF FORMAL SUBMISSION MADE JUNE 2013 TO NSW GOVERNMENT

INDUSTRY WIDE REVIEW OF THE PROCESS OF CERTIFICATION

PART 1

1. INTRODUCTION

The Current Standard of Certification in Australia is not in the interests of the Australian People or the Building Industry as a whole.

A MULTI-DISCIPLINARY COMMITTEE (MDC) was formed to canvas the views of professionals involved in the building industry and to submit to government, recommendations on how to effect better building outcomes for all stake holders.

This proposal does not directly address current BPB proposals. It provides a review, free from the form of the current system, yet endeavouring to implement minimum change to the current system. Our review addresses the issue from the point of view of building industry practitioners rather than from that of a regulatory body.

2. THE PROBLEM

- The current system of certification in any Australian state is not to a satisfactory standard. NSW is probably the worst.
- Sadly today Certification is a collection of pieces of paper, vague in content and without real accountability. In consequence PI Insurance is a major market for the legal fraternity.
- The OC issued by the PCA is only as good as the quality of information given to him.
- In NSW the Insurance industry report a post completion additional cost of 27%.
- A Federal Government report said that 85% of strata units in NSW are defective at completion.
- Even if these figures are exaggerated by 50%, it is still alarming evidence and worse still, not surprising to many in the industry.
- There are those in Government who consider the problem to be restricted to waterproofing, fire and structure. This is incorrect. We all have a responsibility to maintain and hopefully improve all standards in the building industry for the future.
- In the last 3 years the evening news has reported;
  - Bankstown Fire - Leading to the Death of One Occupant
  - Lane Cove Balcony Collapse - Seriously Injury a Whole Family
  - Melbourne Wall Collapse - Killing 2 Backpackers Walking Past the Site
  - Macquarie Park Failure of High Level Balustrade - resulting in the Death of Individual

- Demise of 200 years of traditional building contract. The quality of the product came first, price and program came second. Today the situation is reversed.
- Loss of building surveyor supervision, particularly on small projects.
- Totally unsatisfactory site involvement of design consultants.
- In 2015, as built documentation is not a mandatory requirement of OC. Even the Government do not maintain drawing records at McKell House since 2000.
- Price and program dominates the industry. Everyone strives to do the job properly but they are not supported by the system.
- A Builder who prices a job properly is unlikely to be successful. As a result builders do not staff their sites properly, so sub-contractors have to supervise themselves.
- The Principal Certifying Authorities (PCA) [private or council] are issuing Occupation Certificates to the best standard allowed by the current system of certification, a system unfortunately which does not pass any test of due diligence. It is of no fault of the PCA, the problem is the system.
- This has had a significant impact on insurance premiums, related to the poor reputation of the Australian Construction Industry in World Insurance Markets. Not only is insurance not available for many buildings but the burden of insurance is now carried by the State Government at a cost of millions of dollars every calendar month.
- Demise of 200 years of traditional building contract. The quality of the product came first, price and program came second. Today the situation is reversed. Up until the 1980's, consultants generally worked for the architect. The architect had a personal responsibility to the Client. The consultants each had a responsibility to the architect. At the end of the project there was a clear line of responsibility right through every aspect of the job. Once responsibility for the project was removed from the architect this clear line of direct responsibility was removed and has never been replaced by an equivalent system.

3. TO RESOLVE THE PROBLEM

- We need a fully prescribed system of certification for every branch of a project.
- Design & Construct or Construct Only, main contractor or sub-contractor, the person who designs the product must also inspect and certify the product.
- Under the auspices of BPB, Governance Bodies shall be formed for each discipline. (See Schedule 1)
- The Governance Body for each discipline will be responsible for appointing and dismissing accredited certifiers. They need to be seen to be independent of all vested interest of any professional or industry body.

- The Governance Body for each discipline will nominate the specific requirements that they require in order for any structure to be certified in that discipline. The requirements will cover all aspects of design and site supervision through DA, CC and Final Certificate. The wording of all certificates will also be prescribed to eliminate the current practice of "clayton" certificates. (See Schedule 2)
- We would expect those bodies to be selected from both working persons and retired persons.
- We would expect perhaps between 6 to 12 persons on each Governing Body, the exact number of persons reflecting the number of interested organisations within that discipline.
- The Governance Bodies will draw representation from every representative industry organisation.
- Many of the Governance Bodies will involve persons without tertiary qualifications, reflecting the need to include the knowledge of trades persons.
- A view expressed by many senior persons in the industry at the time of introduction of ISO 2000 was "ISO 2000 is only part of the solution for good QA. We are not building widgets. The only way to get a building built properly is to have the right person in the right place at the right time". This should become the driving edict for any change in Certification rules.
- Good building is about people, not paper with PI Insurance as a backup to a proper system, not an integral part of the system.

4. THE SOLUTION

- Must ensure that the builder can be confident to price the job properly because the process of certification supports him.
- Within a short period of time we should eliminate the huge costs to the insurance industry (and the State Government who underwrite the Insurance Industry).
- Allows more direct connection between industry, TAFE Colleges and Universities.
- Re-establishes proper graduate engineering and architectural training, with site experience. Increase apprentice training to suit the standards required by proper certification.
- Increased certification requirements for all imported materials used in the building industry.

- The person or company who designs must also supervise and therefore be accountable. Otherwise Professional Indemnity liability is meaningless.
- Insurance members on the MDC said that insurance could be available for all buildings but only with meaningful certification. They are a key ingredient in any proposed changes.
- PI Insurance and the legal fraternity should only be a last resort.
- All building projects when the developer is the builder should carry a 7 year special Insurance facility. (levy)
- The PCA is to have the power to decline the services of an AC appointed by the client or builder. BPB to resolve any dispute.
- No Occupation Certificate is to be provided by the PCA unless he has full certificates of compliance (or adequacy) from each of the Accredited Certifiers, together with a full set of signed “as built” drawings.

5. COST OF BUILDING & CONSEQUENTIAL BENEFITS

- Will increase by around 3% to cover consultancy fees to undertake their tasks to a proper standard.
- Will increase construction costs by around 5% because builders won’t be able to “cut corners”.
- Will reduce the cost to the insurance industry by 15% - 20%, which is currently underwritten by the State Government (tax payer).
- Will reduce the cost to the building Owners by substantially reducing their repair costs and legal fees, estimated at 5% of construction cost.
- Will reduce stress levels within the industry itself as well as building Owners.
- Buildings will be better constructed and post-completion defects will be minimised
- Better buildings will reduce post construction completion litigation
- Insurance premiums for Contract Works and other forms of insurance should over time, be reduced
- A significant reduction in the number of building complaints recorded annually will restore confidence in the building industry

6. EXPLANATORY NOTES FOR PROPOSAL

- The PCA may be the Local Council Authority (LCA) or a Private Certifier; both to operate under the same system.

- Certifiers accredited by the BPB will be those people referred to the BPB by the Governance Committee of each of the professional bodies or associations. There should be an AC, as applicable to a specific project, covering approximately 160 codes which currently regulate the building industry. AC's need not be chartered persons but people with proven expertise in their particular field. (Good examples are water proofers and fire protection installers)

- Accredited Certifiers must be qualified professionals or highly experienced tradespeople with proven expertise in their field. They must be able to administer and supervise all work in their area of expertise to a set of rules established by the relevant governance body, as ratified by the BPB. Such rules are to cover standards both for design and for supervision.

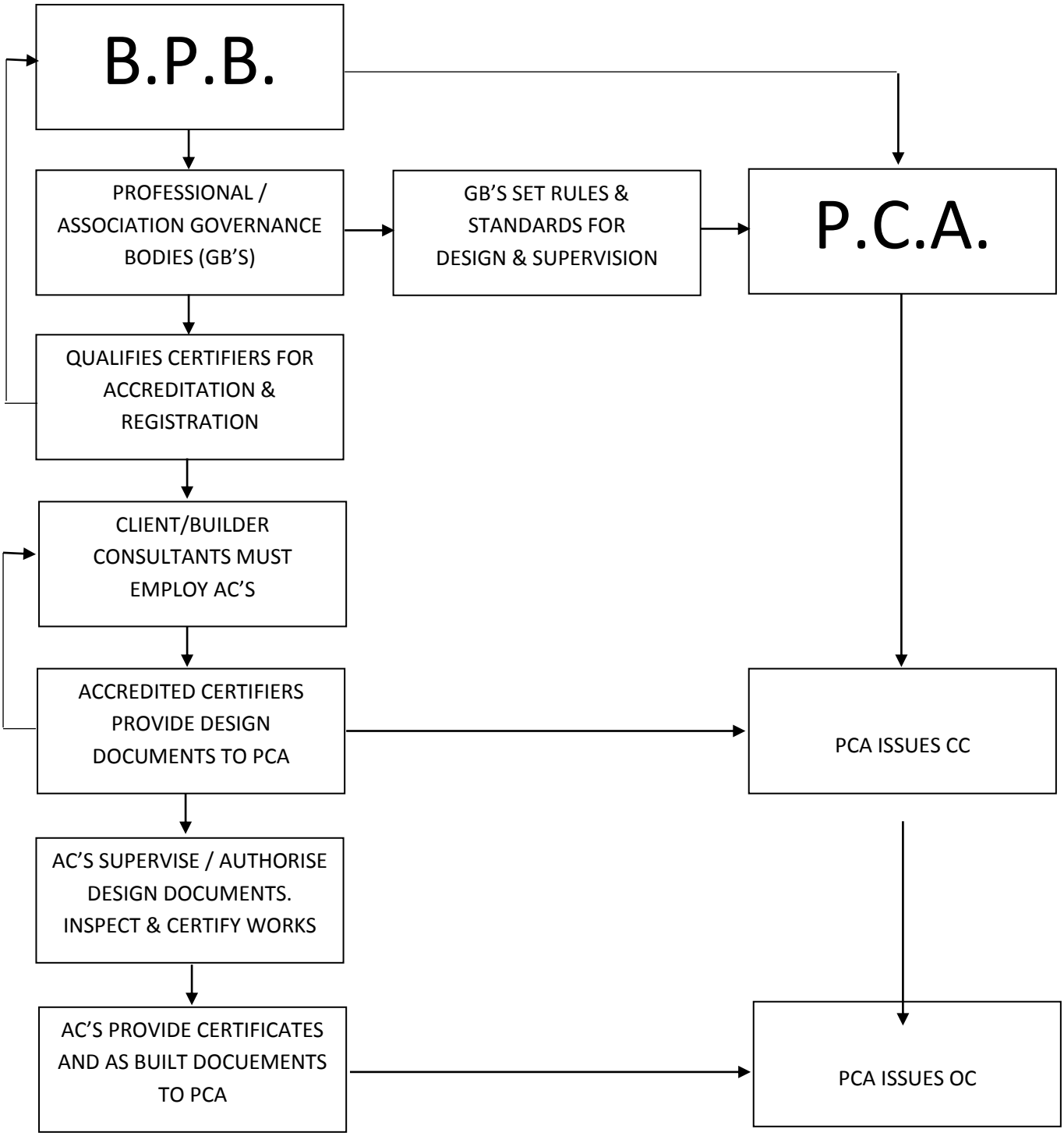
- The AC or his or her nominated qualified professional assistant must sign off on design documents and be the person responsible for progressively inspecting and supervising all works undertaken on site within their area of expertise. The AC must be accountable. Inspections undertaken by an assistant to the nominated AC must be recorded and countersigned by the person accredited.

- Company PI Insurance shall cover the individual as per current insurance policies.

- Current conditional engineering certificates in their present form are unacceptable. ALL works must be certified to the particular standards established by the relevant governance body. It should not be acceptable to limit certification to the "*concept design*" or "*generally in accordance with*" etc.

- Developers of all projects, with the exception of those covered by the Home Warranty Insurance Scheme, should be required to insure against latent or patent defects in construction for a minimum period of seven years from the date of completion. This measure would serve to minimise the opportunity both for the evasion of responsibility by the liquidation of shelf companies and the risks associated with the situation where the PCA is engaged and paid by the developer.

7. PROPOSED STRUCTURE



8. SUMMARY OF RELEVANT QUOTATIONS

Summary of important statements collected over the past 5 months.

"There are approximately 160 codes governing the construction of a building in NSW. There is no way the PCA can know all about the 160 codes. The best he can do is concentrate on 2 or 3".
Quotation from Senior PCA at the BPB Conference dated 31st August 2012.

"The industry today is all about price and programme. Quality of product is of tertiary importance"
Quotation from Structural Engineer - MDC Meeting October 2012.

"85% of strata units built today are not fit for purpose on completion".
Quotation from SMH – May 2012

"Australian Engineers do not enjoy a good reputation in the Insurance Industry due to the number and nature of claims made"
Quotation from an Insurance Representative - MDC Meeting October 2012

"The architect in Australia is still forced to carry say $20 million PI Insurance on a particular project yet engineers are only asked to provide $5 million on the same job".
Quotation from an Architect - MDC Meeting October 2012

"Why is the PCA not forced to be the primary PI Insurer?"
Quotation from an Insurance Representative - MDC Meeting October 2012

"The Clerk of Works has been replaced by BCA consultants, working for the builder direct rather than the building designers".
Quotation from an Architect - MDC Meeting October 2012

"The building industry of Australia needs an operational code of practice to maintain professional standards. This should be formally set down by organisations experienced in the individual fields of expertise, maybe within the BCA".
Quotation from an Insurance Representative/Building Services Engineer - MDC Meeting October 2012

"The PCA needs to be made more accountable by way of operational detail and work diary. We agree that he needs a support frame work to carry out his work".
Quotation from an Insurance Representative - MDC Meeting October 2012

"The developer/builder needs to be encaptured in the system of responsibility".
Quotation from Structural Engineer - MDC Meeting October 2012.

"The PCA is not a certifier, he is a regulator".
Quotation from the BPB conference dated 31st August 2012.
"Builders definitely need more involvement from the design consultants to help them supervise works".
Quotation from Builder - MDC Meeting October 2012.

"If builders price to do a job properly, they will never win a tender. There is no protection within the system against bad practice".
Quotation from NSW State Manager - Builder - September 2012.

The MDC Committee of Engineers Australia concluded at its meeting in October 2012 that the overall cost to the community of any individual building was typically 1.25 times the cost at practical completion. The Insurance Industry does not close a file on any project until after 7 years.
(Note this cost excludes the stress and disruption to the owners/builders)
Quotation from an Insurance Representative - MDC Meeting October 2012

We have now established that a similar investigation of overall building cost in the UK has nominated the multiplier to be 1.2.
MDC Chairman - Meeting with President of Institution of Structural Engineers UK November 2012

"Professional Indemnity is a final level of protection for an injured party, not a front line level of certification".
Quotation from Structural Engineer - MDC Meeting October 2012.

"Having the PCA's paid by the builder/developer is absurd and immoral.
Quotation from an Insurance Representative - MDC Meeting October 2012

"We need to re-establish the professional levels of the 1980's without the contractual difficulties of the era".
Quotation from Structural Engineer - MDC Meeting October 2012.

"In the public service we spend a lot of money improving the written specifications for our projects but fail to exercise the necessary control to actually implement the contents of those specifications on an actual project".
Quotation from a Representative of Public Services – MDC Meeting October 2012

9. COMMENTS FROM AN INSURANCE REPRESENTATIVE

OBSERVATIONS BY DAVID DUFFIELD OF NATIONAL INSURANCE BROKERS

A fundamental issue as evidenced by claims is that there appears to be insufficient and/or independent supervision, record keeping and certification of critical building elements by qualified and responsible professional people. Self-certification may manifest itself in poor installation and the subsequent cost of post construction completion defects rectification and consequent disruption to the end user.

These issues are well understood by the insurance industry as evidenced by insurance claims paid in respect of professional Indemnity, contract works, public liability, and builder's warranty losses. A number of insurers have withdrawn from providing these insurances due to perceived weakness in the quality and certification of work. Cost of rectification of losses can equate to 25% of the original building cost according to the insurance industry

When I read the initial definition of the problem it read like an insurance problem.- the problem is a need for enhanced levels of certification. The cost of insurance ultimately reflects the costs of claims that arise as a result. Insurance in this context is not the cause of the problems but more a solution to assist once issues are identified.

A minimum prescribed professional Indemnity wording could be developed in conjunction with the insurance industry similar to that in place for Builders Warranty.

Consequential Benefits

Professional Indemnity insurance for any project should be to a prescribed minimum standard and minimum limit having regard to the size and complexity of a project. For larger projects principal's should consider the requirement for a project specific cover to embrace all the consultants on the project with its own dedicated project sum insured.

This could potentially lead to an increase in cost as most consultants will already have an annual cover in place which may be perfectly adequate and on top of this we would be asking them to contribute to a project specific cover. The consultants will want to protect their own annual PI cover and may be less protective of a project specific cover. Project specific PI policies can be tailored to sit above the consultant's policies thereby containing overall cost whilst providing a further layer of insurance protection

"Having the PCA's paid by the builder/developer may be seen to lack independence"

In relation to the email from Glenn Ross he talks quite appropriately about Inherent Defects Insurance. It would be good to add that a requirement of this insurance is independent verification by an insurance appointed PCA throughout the construction process.

From an insurance perspective the issues are as follows:

The problem - claims, particularly PI claims, are arising in areas where there has been a failing in basic protocols indicative of an inadequate framework of controls and validations.

Impact on the insurance industry - there is currently sufficient capacity and appetite to write PI covers for consultants. The insurance market will price the premium and impose policy excesses based on their perception of the skills of the consultant and the complexity of the projects that they work on. Insurers have a perception that cost pressures are creating an environment where consultants are finding it difficult to ensure an appropriate framework of controls are in place. From an insurer perspective it generally takes between 3 to 5 years from project completion before they feel confident that any problems with a project have been identified and notified as claims. This can create a considerable lag in reporting of claims since policy inception and difficult for an insurer to gauge his profit from this portfolio.

Insurance line underwriters are competing for capital internally and if a product line is not seen as attractive then insurers may withdraw in part or whole from a product line and reinvest their capital in more profitable product lines. The higher the level of confidence in a product line and /or industry sector the greater the likelihood of ongoing availability of cover - the more insurers in a market segment then the greater the level of competition and ability to negotiate lower premiums. Competition also brings innovation in product development.

Insurers will welcome any initiative which demonstrates good risk management practices and good governance. A key initiative will be for the industry body for the construction sector or the consultants to be able to communicate effectively with the key markets in the insurance industry in respect of the future initiatives. Insurers will be encouraged by this and whilst they will not expect to see improvements in the short term, because of the reporting lag, they will know that the incidence of future claims from new projects under the new regime will be improved. The net effect is this may attract more capacity into the market and create increased levels of competition.

10. MEMBERS OF THE MULTI-DISCIPLINARY COMMITTEE

NAME	COMPANY	FIELD
Charles Rickard (Chairman)	RH Consulting Engineers	Consultant Structural Engineer
Wayne Costin	Costin Roe	Consultant Structural Engineer
David Duffield	NIBA	Insurance
Iain Drennan	Jardine Lloyd Thompson	Insurance
Glenn Ross	Mechanical & Construction Insurance	Insurance
John Richardson	Cox Richardson Architects	Architect
Russell Lee	Cox Richardson Architects	Architect
Eugene Marchese	Marchese Partners	Architect
Glenn Haron	Haron Robson	Building Services Consultant
Alan Obrart	Obrart & Co	Building Services Consultant
Mel Simpson	Donnelly, Simpson, Cleary	Building Services Consultant
Greg O'Neill	Aurora Projects	Project Manager
Robert Hart	Hart Project Management	Project Manager
Brian Hood	Hutchison Builders	Builder
David Nuberg	Watpac	Builder
Darrell Binskin	TAFE	Public Services
Ken Johnstone	Public Works	Public Services

Schedule 1 (Draft Listing)

BPB Governance Bodies

ENGINEERS AUSTRALIA

- Architect and other Architectural Organisations
- Structural, Civil and Geotechnical Engineer
- Electrical Services Engineer
- Mechanical Services Engineer
- Communication Services Engineer
- Fire Safety Engineer
- Energy Management
- Acoustics Engineer
- Hydraulics Engineer
- Lifts

Schedule 2(a) (Draft)

Governance Body To Each Building Type

ENGINEERS AUSTRALIA

Building Type	Architect	Building Surveyor	Structural Engineer	Civil Engineer & Stormwater	GeoTech Engineer	Mech Engineer	Elec Engineer	Fire Engineer	Building Hydraulics	Acoustic Engineer	Lift Engineer	Energy
Retail Centres	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Office Buildings	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi Storey Residential	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4 Storey Walk-up Residential	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓
1-2 Storey Residential	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓
Civil Projects			✓	✓	✓							
Industrial Buildings	✓		✓	✓	✓	✓	✓		✓			✓
Retaining Walls				✓								

Schedule 2(b) (Draft)

Governance Body Rules for Certification

- Each Governance Body will develop a detailed prescribed system covering design and site supervision for their discipline. One Accredited Certifier (AC) recognised by the Governance Body must then ensure implementation for the full list. The AC is a person directly involved in production, not an additional level of bureaucracy.

DA	Development Approval
CC	Construction Certificate
CCDC	Critical Content for Design & Construct Tender
CD	Construction Documentation
CSC	Site Inspection Certificates for critical stages of construction
FCC	Final Construction Certificates
ABD	As-Built Documents Certificate to be issued to PCA

- AC can now recommend issue of the OC for that discipline.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