

January e-news

Issue 52 2019

A word from the Registrar

Opal Tower another example of the need for registration for engineers

Combustible cladding assessments for building industry professionals and fire engineers: golden goose or road to ruin?

CPD pilots for regional Queensland

Welcome to our newest RPEQs



BOARD OF
**PROFESSIONAL
ENGINEERS**
OF QUEENSLAND

A WORD FROM THE REGISTRAR

Happy New Year and welcome to BPEQ's first e-news for 2019.

A major project for BPEQ this year are the CPD pilots in regional Queensland. Starting in April, the CPD pilots are planned for Cairns, Mount Isa and Rockhampton. These courses are designed to address the lack of CPD opportunities available to RPEQs based outside South-East Queensland. To organise the courses BPEQ will be asking for feedback from Cairns, Mount Isa and Rockhampton RPEQs, specifically input on the courses they want.

Late last year the Senate handed down its final report into non-conforming building products.

The report makes several recommendations to improve regulatory oversight in the building and construction sector, most relevant to BPEQ is the recommendation to establish a national licensing scheme and continuing professional development requirements for all building practitioners. A similar recommendation was also made in Peter Shergold and Bronwyn Weir's report for the Building Minister's Forum – [Building Confidence: Improving the effectiveness of compliance and enforcement systems for the building and construction industry across Australia](#). BPEQ will follow these developments with interest and looks forward to working with other states and territories to establish regulatory systems for engineers.

Queensland has taken an active lead in managing conforming building products, particularly combustible cladding. Regulations to deal with combustible cladding are expected to increase the demand for RPEQs registered in fire engineering or fire safety engineering. BPEQ member Suzy Cairney has written extensively about these matters and provides this month's feature article.

A special mention of RPEQs Bruce Judd, Frank Grigg and Kevin Flanagan who received awards in the Australia Day Honours. Bruce Judd was made a Member of the Order of Australia (AM) for service to civil engineering; Frank Grigg was awarded a Medal of the Order of Australia (OAM) for service to engineering and Kevin Flanagan received a Public Service Medal (PSM) for his work with local government in Queensland.

Finally, engineers registering between now and 30 June 2019 are entitled to the half year registration fee - \$114.55.

If we can provide further information or assistance, please contact BPEQ at admin@bpeq.qld.gov.au or call 07 3210 3100 if we can assist you.

KAINE BARTON

A/Registrar



OPAL TOWER ANOTHER EXAMPLE OF THE NEED FOR REGISTRATION FOR ENGINEERS

BPEQ CHAIRMAN

DAWSON WILKIE

The events at Opal Tower will hopefully lead to a renewed government commitment to properly regulate engineering, writes BPEQ Chairperson Dawson Wilkie.

The RPEQ system has been in focus lately with the events at Opal Tower in Sydney. It is too early to tell what exactly went wrong, but the situation has led to many questions about the effectiveness of building regulation and certification in Australia. One thing I notice in the commentary is the surprise that, apart from Queensland, engineers are not required to be registered or licenced to practise.

Queensland's RPEQ system has existed since 1929 (September will mark 90 years since the passage of the original Professional Engineers Act). Over the years registration for engineers has been considered interstate and at a national level. Apart from Victoria it has never progressed beyond an aspiration; despite the highly complex tasks performed by engineers.

In the building and construction industry, engineers design buildings; prepare structural and geotechnical reports; design building systems; specify materials to be used in construction and certify buildings. In Queensland, under the *Building Regulation 2006*, RPEQs are named as competent persons to assist building certifiers.

Competent persons give design/specification help and inspection help by certifying that:

- A building design or specification will, if installed or carried out under the certificate, comply with the relevant building laws (Form 15); or
- That an aspect of building work complies with the building approval and the relevant building laws (Form 16).

The services provided by engineers, particularly in the building and construction industry, affect the health and safety of the public. Registration serves an important purpose in holding engineers to a certain standard and giving the public confidence that a person holding the title RPEQ is a qualified, competent and experienced engineer.

Peter Shergold and Bronwyn Weir's report *Building Confidence* revealed the perceived shortcomings in the building and construction sector, including the lack of registration requirements. [Problems with building compliance and enforcement systems] *are likely to undermine public trust in the health and safety of buildings if they are not addressed in a comprehensive manner.* Among Shergold and Weir's report recommendations to improve the building and construction sector is the establishment of mandatory and consistent registration requirements for building practitioners and compulsory continuing professional development. Shergold and Weir propose that civil, structural, mechanical, geotechnical and fire engineers be registered.

Registration imposed by law is the most effective way of holding practitioners accountable and demonstrating their qualification and competency. In Queensland, an engineer carrying the RPEQ title has been assessed as being qualified and competent to carry out professional engineering services. Elsewhere it is far less straightforward to determine who is and is not a qualified engineer. Indeed, the interim investigation report into Opal Tower stresses that 'independent and qualified' structural engineers should be engaged to check the major rectification works.

Registration does not guarantee that errors and accidents will not occur. However, registration is an important safeguard to prevent unqualified and inexperienced persons from carrying out professional engineering services. A qualified and competent structural engineer should always be engaged to assess the structural integrity of a building. A qualified and competent fire engineer should always oversee and evaluate the design, installation and maintenance of fire safety systems.

The upside of what happened at the Opal Tower will hopefully be renewed commitment from state and territory governments to manage unscrupulous practitioners and properly regulate engineering.



UPCOMING CPD COURSES AND CONFERENCES

To include an upcoming CPD course in the e-news contact BPEQ.

AIRAH

Smoke Control and Fire Dampers

Brisbane: 14 February 2019

Building Ventilation

Brisbane: 15 February 2019

ENGINEERS AUSTRALIA

Interoperability and Data Insights in Utility IoT Solutions

Webinar: 5 February 2019

Implementing Safety in Design

Brisbane: 7 February 2019

Piling Practice – Design and Construction

Brisbane: 21 February 2019

BIF Act Reforms

Brisbane/Webinar: 22 February 2019

IPWEAQ

Queensland Urban Drainage Manual Workshop

Gold Coast: 27 February 2019

Road Safety Audits Workshop

Brisbane: 19-20 February 2019

Road Safety Audits Refresher Workshop

Brisbane: 21 February 2019





COMBUSTIBLE CLADDING ASSESSMENTS FOR BUILDING INDUSTRY PROFESSIONALS AND FIRE ENGINEERS: GOLDEN GOOSE OR ROAD TO RUIN?

BPEQ LEGAL REPRESENTATIVE

SUZY CAIRNEY

Fire engineers should carefully consider whether to undertake combustible cladding assessments and the risks involved, writes BPEQ legal representative Suzy Cairney.

In response to public concerns about the use of combustible building materials, the Queensland Government has introduced a new regime to assess the safety of existing cladding on buildings. On 1 October 2018, changes to the *Building Regulation 2006* (Regulation) commenced, affecting privately-owned class 2 to 9 buildings of type A or type B construction, (i.e. mainly, but not exclusively, commercial buildings over 3 story's)¹ for which a building development approval was given **after 1 January 1994 but before 1 October 2018** for building work to build the building or to alter the cladding on the building. The new changes have ushered in a process for such building owners to assess whether buildings have potentially combustible cladding (i.e. made of a material not consistent with the Building Code of Australia (BCA), or deemed combustible under AS 1530.1-1994.

This new regime may provide a golden business opportunity for some building industry professionals and RPEQ fire engineers with the ability to cater to this new market need. However, building industry professionals and fire engineers should carefully consider whether to undertake this type of work as there are risks involved.

¹ See the QBCC's *Classification summary of buildings and structures* available online: <<https://www.qbcc.qld.gov.au/sites/default/files/BCA%20Classes%20of%20Building.pdf>>.

Given the possible catastrophic risk of harm to occupiers if combustible cladding is present and a fire occurs, the potential liability for some building industry professionals and fire engineers could be considerable. Certifiers, architects and engineers already carry liability with respect to their work, but arguably now in some circumstances, any incorrect assessment of cladding could also result in claims for reduced value of the building. Losses could be incurred if a certifier simply cannot find sufficient information to make a determination, and (perhaps prudently) opts to certify the cladding as non-compliant. Also, an assessment does not have to be incorrect for building industry professional or fire engineer to be drawn into claims, especially if a claim is a class action.

Combustible cladding checklist

Building owners must complete a three-part combustible cladding checklist (checklist) via the online system established by the Department of Housing and Public Works to identify whether combustible cladding exists, with Part 1 to be **completed by 29 March 2019** by building owners. The online system can be accessed [here](#).

Work to be carried out by building industry professionals

Part 2, to be completed by 29 May 2019, requires a deep knowledge and understanding of BCA requirements and therefore requires a 'building industry professional' (see below) to be engaged by the building owner. If the building owner already knows or suspects that the building is an affected building and gives the QBCC notice of that knowledge or suspicion, Part 2 can be bypassed and the building owner must proceed to Part 3.

The building industry professional must comprehensively assess the building, confirm the accuracy of the information prepared by the building owner in Part 1 and issue a building industry professional statement. With older buildings or buildings that have changed hands a few times, this information could be difficult to locate, or incomplete. Building industry professionals may want to ask the building owner to provide the information that is available before agreeing to undertake the assessment. It is intended that the building owner will be able to rely on the information provided in the statement to complete Part 2 of the checklist.

As part of this process, the building industry professional will make a determination about the building's type of construction and provide an opinion on whether any combustible cladding forms part of or is attached or applied to an external wall or another external part of the building. This determination will provide an indication of whether the building requires further assessment by a fire engineer in Part 3 of the checklist.

Who is a building industry professional?

The Regulation defines a building industry professional broadly to include the following:

- building certifiers (level 1);
- persons holding a QBCC licence of the following classes:
 - builder – open;
 - building design – open; or
 - fire safety professional;
- practising architects;
- practising professional engineers registered in the following areas:
 - civil engineering;
 - fire engineering;
 - fire safety; or
 - structural engineering.

For private buildings of no more than 3 storeys and 2,000m², a building industry professional will include building certifiers (level 2), and persons holding a QBCC licence as builder or building design for medium rise.

Building industry professionals: relevant skills, knowledge and experience

Building industry professionals will need to consider a number of factors in deciding whether to accept this type of work. While for many, this could be a welcome source of additional revenue, others may need to implement more protections for their businesses before venturing into this area.

Building industry professionals undertaking this work must of course have a sound knowledge of the BCA and its application to buildings as they will be required to determine if there is any combustible cladding on the building's external walls. They will also need to give due consideration to other characteristics, including whether multiple classifications or any concessions apply which may affect the type of construction, compartment floor area and volume limitations, separation by fire walls as they may relate to fire compartment floor area and volume limitations, etc.

A visual inspection of the building will be required, together with a review of design documents and specifications, façade engineering specifications and other relevant documents to confirm the as-built documentation aligns (or perhaps does not align) with as-approved documentation. Where this documentation is not available or is incomplete, this should be flagged in the statement, and we would expect this would increase the chances of a recommendation to the building owner to proceed to Part 3 (see below). All necessary and available documentation relating to the building's design and construction must be reviewed, including records for building approvals and Certificates of Classification. Building records may also need to be obtained from the local government and from the building's builders and designers.

The building industry professional may need to consider whether any product substitution or unapproved changes of cladding systems have occurred and must ensure that evidence supporting the identification of materials used in external walls is representative of the building's current state. It is not clear how this is to be done, but physical testing is probably needed as a matter of prudence, even if the building is operational throughout this phase. The costs of that testing, plus remediation of affected parts of the building, will need to be factored into pricing.

The assessment process is intended to allow building owners to rely on a building industry professional's technical qualifications, supported by their knowledge of the BCA. Accordingly, the building industry professional makes a declaration that the information in the statement provided to the building owner is true and correct. This may not be easy to do on an older building with little available information and limited or no physical testing to be carried out.

Building owners could have as little as two months to complete this stage. Building industry professionals will need to ensure they are properly resourced to meet this timeframe.

Work to be carried out by fire engineers

If, after the building industry professional's assessment, there is an indication that the building may be affected by combustible cladding, the building owner will be directed to proceed to Part 3 of the checklist via the online system.²

Part 3 requires specialist knowledge and the application of fire engineering principles, and therefore requires building owners to **engage a RPEQ fire engineer by 27 August 2019**. Defined in the Regulation as practising professional engineers registered (i.e. RPEQs under the *Professional Engineers Act 2002*) in fire engineering and/or fire safety, the fire engineer will provide a technical assessment and information required to answer the questions in Part 3.

The Fire Engineer will make a determination as to whether the building is or is not affected and in doing so, must issue:

- a *building fire safety risk assessment* report (BFSRA); and
- a fire engineer statement.

Both documents will be relied upon by the building owner to complete Part 3 of the checklist, which together with the BFSRA and fire engineer statement, must be submitted to the QBCC by **3 May 2021**.

Fire engineers will need to provide an **expert** opinion on whether the building was subject to, and approved based on, an existing fire engineering assessment which addresses the relevant considerations for external fire spread in buildings and an evaluation of material and assembly fire performance against the existing building's fire strategies.

In carrying out their assessment, fire engineers will need to review available documentation and will be required to apply detailed analysis of the building's fire strategy and quantification of the fire performance of the parts of the building's external wall assembly. The extent to which this is possible may depend, at least to some extent, on the information available about the building. With older buildings, this information may not be readily available.

Capacity and resources

Both building industry professionals and fire engineers need to be ready, with the capacity and resources (e.g. availability, systems and necessary equipment) to meet market demand, together with the time to implement proper business administration and contracting practices, carry out their inspections, and prepare the required reports and statements. The timeframes for this are quite tight.

We anticipate that there will be a large demand for the services of RPEQ fire engineers as there are only around 160 in Queensland. In addition, not all fire engineers will be ready or willing to take on this kind of work. Non-RPEQ fire engineers interested in this work should consider applying for RPEQ [registration](#).

² See *Building Regulation 2006* (Qld), section 16V.

The capacity to undertake the work, together with the potential diversion of or investment in resources must therefore be contemplated in the context of a practitioner's overall business strategy. IT and document management systems may need to be upgraded to ensure records are complete, accurate and readily accessible.

Insurances

Adequate insurance coverage will be critical for assessing buildings for combustible cladding. Professional liability and professional indemnity insurance are a must, and it may be prudent to review whether you have a suitable level of errors and omissions, and directors and officers liability insurance. While professional indemnity insurance is a 'necessary evil' already for building certifiers, architects and engineers, the level of cover may need to be reviewed. Also, builders with open QBCC licences do not always have professional indemnity insurance and we suggest they investigate the cost/benefit of obtaining it before undertaking this type of work.

Building industry professionals and fire engineers should also take advice from their insurance providers to ensure that their current insurance coverage is not affected (or voided) by undertaking work of this nature, especially if the contracts offered by building owners impose higher liability than usual.

Contracting

We think we may see an increase in the requirement for building industry professionals and fire engineers to indemnify building owners. Building industry professionals and fire engineers should ensure that they enter into appropriate contracts adequately protecting their business. This will likely be a services-based contract as the average design contracts used in the building industry may not adequately guard against liability or deal with the specific risks associated with this type of work. Building owners wishing to sell the building may want the purchaser to be able to rely on the report. That could extend liability and affect pricing.

As always, building industry professionals and fire engineers should ensure they assess contract risks as well as scope before giving a price.

The changes to legislation are to be welcomed as they should make us all safer and will generate business for many consultants. The flip side is that it will cost building owners more and may reduce the value of a building. How this will play out in the property market is yet to be seen.

For more information, the Department of Housing and Public Works has published a comprehensive guide to assist building owners, building industry professionals and fire engineers for assessing building with combustible cladding. It can be accessed [here](#).

SUZY CAIRNEY

Suzy Cairney was appointed as the Board's legal representative in April 2018. Suzy is a projects and commercial lawyer whose background is in project development and operational contracts in the ports, civil construction and resources sectors. She has worked both in Australia and overseas, and has advised government clients, principals, developers, contractors and operators on a wide range of major infrastructure projects. Suzy is a Partner in the Brisbane office of Holding Redlich.



CPD PILOTS FOR REGIONAL QUEENSLAND

To continue to be eligible for registration, RPEQs must complete 150 hours of continuing professional development (**CPD**) over a three-year period.

CPD is expected to include a combination of activities such as:

- Formal education and training (courses/lectures);
- Informal learning activities (e.g. reading journals and manuals);
- Conferences and meetings;
- Presentations and papers;
- Service activities (e.g. CPD auditor and reviewing technical papers); and
- Mentoring

RPEQs in regional Queensland have often told BPEQ that they find it difficult to meet their CPD obligations. Courses are not readily available outside of South-East Queensland or online. Attending a CPD course in Brisbane involves the cost of the course itself as well as costs for flights and accommodation and time taken travelling.

BPEQ has listened to regional RPEQs and is developing CPD pilot courses to take place in Cairns, Mount Isa and Rockhampton. The full or half day courses will be provided free of charge and are only open to current RPEQs. Preference will be given to non-technical courses so that the course content is relevant to RPEQs in all areas of the engineering.

To organise the courses, BPEQ wants Cairns, Mount Isa and Rockhampton RPEQs to take part in a survey to select from a list of course topics. Possible course topics include:

- Risk management
- People management
- Effective communication
- Legal and ethics
- Project management
- Time management
- Report writing
- Influencing and persuasion

The survey will be distributed to RPEQs in Cairns, Mount Isa and Rockhampton in the coming days.

More information on CPD requirements for RPEQs can be found [here](#).

WELCOME



WELCOME TO OUR NEWEST RPEQS

BPEQ extends a warm welcome to the following engineers who recently became registered:

| | | | |
|-----------------------|------------------------|-----------------------------|-------------------------|
| Nikki AKBARI | David COLLINS | LukeGERICKE | Fiona JOHNSON |
| Pooria ALAVI | Guy CONNEW | Mastoureh GHOLIPOUR SALIMI | Ahmed KADWA |
| Cameron ALEXANDER | Dean COOPER | David GIBSON | Prakash KANNAPPAN |
| Fahad AMIN | Eric CRAGG | Hakan GIRGIN | Peter KARANTONIS |
| Jennifer ANNICE | Kay CROWLEY | Ravindu GOONAWARDENE | Fatemeh KASHEFIZADEH |
| Mehrad ARASHRAD | Simon CUNNINGHAM | Gavin GRACE | Jessica KEOGH |
| Tyrone ATTARD | Matthew DAGG | Harley GREAVES | Reece KINNERSLY |
| Oluwatoyin AYODEJI | Christopher DARBYSHIRE | Arturo GUADALQUIVER | Maxwell KITSON |
| Mohab AYOUB | Bernardo DAVID | Xu GUAN | Stephen LADDS |
| Damir BAJROVIC | Michael DEACON | Sandeep GULATI | Muhammad LATIF |
| Abhi BANERJEE | Ryan DEWAR | Ugarala Liyanage GUNASINGHE | Jeffrey LAYTHAM |
| Leigh BAUGHURST | Michael DOBBS | David HACKNEY | Soon Kweon LEE |
| Joel BAXTER | George DOLEZAL | Edward HAIKAL | Weihua LI |
| Matthew BECKETT | Yuchao DONG | Zhujiang HAN | Guan LI |
| Andrew BEECROFT | Jeffrey DUANCE | Asbjorn HANSEN | Hui Xian LIAN |
| Kenneth BELL | Sam DUNNING | Mohammed HASHIM | Ivan LIM |
| Mairaj BHATKAR | Jeffery DUSTING | Warren HAWKES | Chern Kuang LIM |
| Steven BOLDEMAN | Emma-Jane DWYER | Wei HE | Redentor LIM |
| Stephen BRAMMER | Austen EASTERBROOK | Steven HEFFERNAN | Yijie LIU |
| Nicholas BRISTOW | Terence EFSTATHIS | Martin HEWITT | Miao LIU |
| Connan BROWN | Mehdi EFTEKHARI | Roger HORWOOD | Nihal LIYANARACHCHI DON |
| Benjamin CAHILL | Amanda ELSDEN | Shuangkai HOU | David LOWARDI |
| Christopher CAMP | David ENCHELMAIER | Duncan HOWIE | Craig LOWE |
| Matthew CARSON | Wei FANG | Jason HUA | Mark LUNA |
| Elia CHABKE | Michael FARNWORTH | Shuhua HUANG | Christopher MACDONALD |
| Ryan CHALMERS | Babak FATTAHI | Talal HUSSAIN | Anthony MACDONALD |
| Hoi CHAN | Jake FIGUEROA | Mandour IBRAHIM | Huu Nghia MAI |
| Prem CHAND | Arvin Joseph FIRMALAN | Essam IBRAHIM | Issa MAKDISSI |
| Tariq Saleem CHAUDRY | John FITZGERALD | Ahmed IBRAHIM | Alan MALEK |
| Jing Xian CHEN | Patrick FITZGERALD | Phillip IMRIE | Chenyi MAO |
| Jayakumar CHIDAMBARAM | Therese FLAPPER | John JARDINE | Paul MARSDEN |
| Saurabh CHOPRA | Clinton FORD | Bitu JAVERSHIAN | Steven MARSHALL |
| Frank CHU | Howard FOSTER | Maryam JAVIDNEJAD | Salman MASHHADIFARAHANI |
| Kelly CHU | Peter FRASER | Rasasingam JAYANTHAN | Jakob MATUZIC |
| Murray CLARKE | Giuseppe GALATI | Milinda JAYARATNE | M.Firas MAWARDI |
| Matthew COCHRANE | Andrew GANE | Douglas JENKINS | Raoul McALISTER |
| Trent COLLINS | Lucas GARRETT | | |

WELCOME

Katherine McCOMBE
Ryan McCORMACK
David McDONALD
Kieran McGEOWN
Ahmed MORSY
Steven MURNANE
Brigitte MYERS
Muhammad NAJIB
Rajkumar NATARAJAN
Elissa NG
Canh NGUYEN
Hoan NGUYEN
Patrick NOKESENGIM
William NTI
Mark O'BRIEN
Julien PACHOT
Chaminda PADUKKAGE DON
Sandeep PATEL
Michael PATMORE
Asrar-ul-Haq PEER
Sudesh PERERA
Jo-Anne PERRETT
Steven PERRETT

Khiem PHAM
Edward PLOTKIN
Mitchell POOLE
Darshit PRAJAPATI
William PRENTICE
Nadesan PUSHPARAJ
Mohammadreza RAMEZANI
Rudd RANKINE
Richard RHIMES
Hassan ROODBARI
Adam RUXTON
John RYAN
Hassan SABZEHALI
Syed SALIM
Maryam SAMADI
Robert SAMSON
Sadra SARRAF
Mark SEAWRIGHT
Ayman SHAHALAM
Steven SHEARS
Peiyong SHEN
Gregory SHORT
Abdul SIDDIQUI

Victor SIM
Patrick SMITH
Graham SMITH
Brenton SONEGO
Hamed SOROUSHNIA
Matthew SWANSON
Jack TAM
Juanita TAYLOR
Robyn TEET
Jayampathy TENNAKON
Sudhakar TIWARI
Vinay TRIVEDI
Adam TSCHIDA
Toby TURNER
David UHLHORN
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Pontjo UTOMO
Anthony VAN DER LINDEN
James VAN HOMRIGH
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Jigu ZACHARIAS
Seyedali ZAHEDI
Peter ZAPOTEZNY
Ye ZHANG
Xinzhao ZHANG
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Don't forget BPEQ is on LinkedIn. To keep up to date with the latest news and events from BPEQ or to start a discussion on registration or engineering issues generally, click **FOLLOW**.

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