

**INQUIRY INTO REGULATION OF BUILDING
STANDARDS, BUILDING QUALITY AND BUILDING
DISPUTES**

Organisation: NSW Plumbing Trades Employees Union and Plumbing Industry
Climate Action Centre

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Mr David Shoebridge MLC
Chair
Public Accountability Committee
Legislative Council
Parliament of NSW

Dear Chair

Inquiry into Regulation of Building Standards, Building Quality and Building Disputes

Thank you for the opportunity to contribute to the Public Accountability Committee's *Inquiry into Regulation of Building Standards, Building Quality and Building Disputes* (the Inquiry).

Enclosed is a joint submission from the NSW Plumbing Trades Employees Union (PTEU) and the Plumbing Industry Climate Action Centre (PICAC).

Given the breadth of the Inquiry's scope, we have focussed this submission on what we consider to be the key issues we believe the Committee should be mindful of when forming its recommendations to improve building quality and community safety in NSW. In summary, these key points are:

- There are **risks to the public and individuals which are inherent in plumbing and fire protection work**. The Inquiry is looking at building standards and building quality. Central to the safety and quality of any building – commercial, residential, public – is the effectiveness and safety of its plumbing, fire protection, heating, cooling and water and gas reticulation systems. The submission goes into more detail on plumbing related risks and hazards and provides some examples of the nexus between community well being and safe plumbing, heating ventilation and cooling (HVAC) and fire protection systems.
- **The best way to manage those risks and hazards is to ensure that only those individuals trained and skilled to do so work on those high-risk installations** and deal with high risk products. The only way to ensure that is through occupational licencing of all plumbers, gasfitters, HVAC and fire protection professionals.
- **The link between high quality training and community safety** is explored further in the body of this submission, as is the existing award-winning industry training model currently delivering high quality industry relevant outcomes to students in Victoria and Queensland.
- Licensing and other **regulatory measures are only effective risk mitigators when they are properly oversights and enforced**. An adequately resourced dedicated industry regulator, with industry expertise and understanding, is key to delivering better safety outcomes for the people of New South Wales.

Our views on these broad themes are set out in more detail in the attached. Should you wish to discuss any element of this submission further with the joint submitters, please contact Chris Seet, NSW Assistant Secretary, PTEU on 0401 066 229.

Yours sincerely

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SUBMISSION

1. Plumbing and Fire Protection work is high-risk requiring active regulation

In untrained hands plumbing products can be as dangerous as firearms, toxic chemicals or explosives. Risk is associated with every element of plumbing, be it gas installation and the associated carbon monoxide and other gas related poisoning hazards; water borne bacteria and disease outbreaks; scolding risks from not fit for purpose taps or fittings; lead leaching out of corroding pipes; or the obvious risks associated with ineffective or non-functioning fire protection systems.

Effective and safe plumbing products and the skills, training and competence of practitioners are the only lines of protection - for households, community facilities, offices, schools, hospitals and so on - against a wide range of potential risks and hazards.

The Grenfell Tower disaster in London in 2015 is an extreme example of where the use of inappropriate materials can result in catastrophe. If the flammable cladding was not on the market it would not have been on the tower block. That tragedy followed the near disaster in Melbourne in 2014 when the Lacrosse Tower, which was clad in Grenfell type flammable aluminium cladding, and where the fire spread to 13 stories in 13 minutes. If it was not for a well-functioning and properly installed fire protection system, the Lacrosse fire would have been a major catastrophe. A further fire broke out in the 41 storey Neo200 apartment building in Spencer Street in Melbourne's CBD in February of this year. Again, it was the effectiveness of the fire protection systems which prevented a large-scale tragedy.

Another well documented example is the 2014 recall 4000kms of Infinity electrical cable, involving an estimated cost to consumers and homeowners of more than \$80 million. The relevant cable was found to prematurely age leaving the insulation brittle and prone to cause fire and electrocution.

It is not just fire risk that is relevant here. The very life blood of our community and our economy, our ability to access abundant, unadulterated water, is plumbing and plumbing products dependent. Plumbing and water treatment failures can be catastrophic. They can result in mass casualties as occurred after an outbreak of severe acute respiratory syndrome (SARS) in Hong Kong last decade, which saw 321 people infected by SARS resulting in 65 deaths. Investigations into the outbreak found that poor plumbing design coupled with faulty plumbing materials caused the loss of a water barrier caused the loss of a water barrier seal in a U-shaped water trap. The water barrier seal evaporated allowing air to escape from within the sanitary drainage system and into the building. The economic cost of the SARS outbreak in Hong Kong is \$60B.

In the city of Flint Michigan in the United States, thousands of people were impacted by lead contaminating the city's water supply, a problem directly attributable to corrosive pipework. In Australia we have had issues with lead also, such as in Western Australia where lead has been detected in the water supply for the new Perth Hospital.

Plumbing products can be ticking time bombs. Plumbing product related risks, associated with things like lead poisoning, or asbestos in products, is that the associated impacts or illnesses may take years, sometimes decades, to be detected. In this context, plumbing products that are installed, and then leak, break or otherwise cease to be effective, can be causing damage today which we may not know about for many years.

The use of skilled, qualified and competent practitioners and fit for purpose, certified products can prevent these large-scale disasters and reduce the likelihood of more localised failings. Conversely, the use of unskilled labour and/or plumbing and building products that are not fit for purpose can have serious impacts in terms of fire risk and community safety.

Given the risk profile attached to plumbing and plumbing products, it makes good regulatory sense to attempt to reduce, as far as possible, the opportunity for failure by removing unsuitably skilled practitioners and not fit for purpose products from the market as far as possible. The fewer unsafe products there are within a marketplace, the lower the likelihood that the product will be installed inappropriately, and therefore the lower the likelihood of consumers being killed, injured or getting sick from a failure attributable to that product.

Failing to take necessary measures to prevent foreseeable failures, thereby allowing incidents of failure to accumulate in sufficient number to serve as evidence of a need to make a change, is not a conscionable or appropriate way to approach regulation of a market with such a significant risk profile.

2. Licensing the key to better outcomes in Fire Protection & HVAC (incl medical gasses)

As occurs in many highly cost competitive sectors, especially in a political context in which deregulation itself is considered a desirable end, industry fragmentation or segmentation can occur. Pressure comes on regulators and policy makers to view established systems as a series of component parts which can then be “opened up” to a broader market of competitors, resulting, it is argued, in efficiencies and consumer benefits.

We submit that this is not an appropriate way to view the series of interconnected systems and installations which comprise the increasingly complex and sophisticated plumbing and fire protection sector.

2.1 Fire Protection Licensing

In Fire Protection for example, to properly service and maintain a contemporary system, a person needs to know how the system works in its entirety. However, in NSW, a license is required to install a fire protection system, and a thorough and comprehensive qualification is required to obtain that license, yet no license is required by those currently allowed to inspect, test and maintain those systems. It makes no sense from a risk management perspective, especially in the heightened risk environment created by the cladding issue.

To view the fire protection qualification as just the aggregation of the individual competencies is to be ignorant of how their interplay actually works, and not an appropriate construct in the fire protection context. Fire protection systems are a series of interlocking components and connections, each dependent on the other for the system to be effective. That is why the Certificate III in Fire Protection qualification obtained under an Australian Apprenticeship Agreement represents the build-up of layered and inter-connected components of knowledge, competency and experience that has a value greater than the sum of all its component parts.

It is imperative that all aspects of fire protection work carried out by competent practitioners with the appropriate qualifications and credentials. The best way to achieve that is to adopt a licensing framework similar to that in place in Victoria which would ensure all elements of fire protection work (including inspection and testing) are the exclusive domain of licensed persons.

Fire protection is one area which needs urgent attention in the form of a licensing regime. Another high-risk area, mechanical services plumbing, also requires urgent regulatory treatment in the form of license coverage.

2.2 Mechanical services Licensing

Mechanical Services work involves mechanically heating, cooling and ventilating residential and commercial buildings. It also includes plumbing work for medical gas equipment. The work is highly specialised and technical. It is also very high risk, in the sense that a failure in terms of maintenance of an air conditioning cooling system in a major hospital or shopping centre, can expose the community to a deadly legionella outbreak. Air conditioning systems provide a powerful means of transmitting the disease the droplets of water sprayed from their exhausts and then inhaled by unsuspecting victims.

In NSW currently, mechanical services work, including medical gasses work (the systems that deliver the gasses to hospital wards and surgical theatres, and the systems which failed resulting in the Bankstown hospital tragedy) is not subject to license. It is licensed work in Victoria and Queensland, but not in NSW. This situation is exposing the residents and communities of NSW to unnecessary and preventable risks.

3. Training drives quality which drives safety

The Plumbing and Fire Protection Industry is changing and advancing all the time. New products and ever more efficient systems for heating, cooling or supplying gas and water to buildings are emerging every day. In some parts of the construction sector, such as health infrastructure, the rapid advancements have been particularly pronounced. Medical gasses, for example, is an area of increasing complexity and importance, and one where the quality of training can have life and death consequences. Similarly, modern HVAC systems in large apartment towers, shopping centres and other public spaces require skilled professionals to install, service and maintain them if the community is to be kept safe from threats like Legionella bacteria.

In Fire Protection, employers are seeking graduates who can work on the very latest complex fire protection systems currently being installed in major infrastructure developments, like tunnels, or in public venues like new sports stadiums.

3.1 The PICAC model

Just under a decade ago, the plumbing and fire protection industry took training into its own hands. Industry developed a ground-breaking collaborative industry partnership PICAC (Plumbing Industry Climate Action Centre).

PICAC is a partnership between the Plumbing and Pipe Trades Employees Union, the Master Plumbers Association, the National Fire Industry Association and the Air-conditioning and Mechanical Contractors Association.

It is the result of industry determining the most effective way to deliver these desired outcomes was to develop an industry partnership which would design and deliver training by the Industry, for the Industry.

PICAC was conceived of in the aftermath of the Millennium Drought. The Industry was challenged by policy makers and the community to develop a means of ensuring the Australian community has available to it the skills necessary to respond to climate change and water scarcity, and to embrace and utilise contemporary plumbing systems and water and efficiency technologies.

At that time there was an identifiable and potentially very dangerous gap emerging between the training outcomes being delivered by the training sector and the skills and knowledge being demanded by employers. So rapidly was the Industry changing and so advanced were the products entering the market, that the training sector was unable to keep pace. Industry knew it had to develop a model that would drive up currency in training and allow the community and the Industry to benefit from new innovations and technologies. Industry recognised that to meet this challenge would require the development of a whole of industry training model which delivered:

- **currency of training** – training that utilised the most contemporary technologies and training innovations from around the world and which would equip Australian students and therefore the economy with the skills necessary to grow and adapt to the changing climate.
- **quality and certainty** for students and employers – employers were seeking consistency in terms of skill level of apprentices.
- **training which is adaptable, and responsive** to changing industry requirements and new products and systems; and which utilised mobile training facilities and interactive technologies to bring training to remote and regional areas.
- **new opportunities** for new students; for transitioning workers in key economic centres undergoing structural change, like the Latrobe Valley; for Indigenous students through PICAC's strategic partnership with RAW Recruitment; and for more women to enter the Industry.

Since its creation just over a decade ago PICAC has trained or re-trained upwards of 50,000 Plumbing, Fire Protection and HVAC professionals and in the last year alone delivered over 300,000 hours of training to more than 7,500 students (in Victoria and Queensland).

PICAC's first state of the art training facility in Brunswick, which contains world class plumbing training and water and energy efficiency equipment and fittings, is now an Industry focal point and Centre of Excellence. Winner of the Australian Small Training Provider of the Year Award in 2015, the quality of PICAC training is second to none.

PICAC is a not for profit entity. PICAC's goal is to advance the Industry as a whole, rather than the particular interest of any of its component parts. It is a model based on collaboration and shared commitment amongst the stakeholders to excellence – in terms of the quality of training delivery and industry outcomes.

Last year PICAC, through its industry RTO partner FiT set up training in NSW and is now delivering the sprinkler fitting apprenticeship to its first two groups of apprentices. PICAC plans to expand the Lidcombe facility and equip so that it will join the Victorian and Queensland facilities and fast become the third Fire Protection Centre of Excellence.

PICAC Industry training also contributes to a safer built environment by keeping occupants as free as possible from the various hazardous substances related to plumbing, heating and air conditioning and from fire risks like those we saw realised in the Grenfell Tower fire in London and the near tragedy in the Docklands Lacrosse fire in Melbourne.

The Plumbing, Fire Protection and HVAC Industry is a key enabling sector. No building can be complete without the expertise of the Industry. Ensuring the Industry operates effectively is key to the broader construct sector's ability to operate, to infrastructure, the health system, etc.

It is also one of the most significant agents of community health and well-being, dealing safely with a range of hazardous and potentially life-threatening substances, situations and elements. The integrity of our entire built environment, and the safety of our private dwellings and public buildings depends to a very large extent on the skills and knowledge of Plumbing, Fire Protection & HVAC professionals which in turn is a function of training quality.

The experience of the past decade shows that the Industry training model brought to life through PICAC in Victoria works. It has seen the sector grow seamlessly through the most recent boom in the construction sector and is delivering the skills necessary to meet the infrastructure agenda of government. This will only remain the case in Victoria - and become the case in other jurisdictions - if further expansion is undertaken and investment is made.

Industry based not for profit training grows the overall training pie. PICAC partners work in collaboration and not competition with TAFEs – allowing both to focus on what they are best equipped to deliver driving efficiencies overall. The PICAC model allows government to leverage industry investment, enabling investment in high-cost, high-tech capital, delivering a world-class and constantly developing industry. It also allows TAFE to focus its investment, leveraging industry investment so that it can continue to be a sustainable universal provider.

4. Effective regulation crucial to community safety

High quality industry training, licensing and any other regulatory measures are only effective as risk mitigators when they are properly designed and oversighted. We consider that a positive development for New South Wales would be the adoption of a dedicated Building regulatory body, which would include a legislated Plumbing Trades Council, which would also be the licensing authority for the plumbing, fire protection and HVAC industries.

As we have seen with the cladding crisis, and a range of other building and related failures, the relevant community and financial risks are so significant that there is a vital role for government to play in managing those risks. The outcomes of failures are too dire to leave it to the market and contracts to manage. Failures in high risk applications – gas, fire protection, air conditioning units – must be prevented, not allowed to occur and then be remedied by litigation.

In considering the role for the government we would argue that in outsourcing certification and or inspections the government outsources direct responsibility for these things but not accountability for the outcomes. In the context of building inspection and certification, we submit that it is not a question of whether third party certifiers have a role, but more a question of what role they play and what oversight is applied to their work and accountability taken for it.

At present, there is not adequate regulatory oversight of third party surveyors. In our view, government has an oversighting role to play across the industry. We would support a model whereby the government regulator received a series of certification and inspection notices as part of a package of compliance information which would then inform the regulatory decision as to the overall compliance of a building or installation.

In determining the appropriate role for government, we would encourage regulatory designers to explore a range of regulatory interventions and collaboration points with industry, which could be applied at various points of the supply chain, to help mitigate the risk of failures occurring.

The objective should be to construct the regulatory architecture in such a way as to create a web of compliance points throughout the supply chain. For example, products or installations readily identifiable as being high risk (gas, air conditioning, fire protection etc), could be placed under regulatory surveillance from the day they leave the factory floor to the day they are installed. Contemporary product bar coding and labelling technologies make it relatively straightforward to design an effective tracking process in collaboration with industry participants throughout the supply chain (importers, wholesalers, retailers, installers).

Whatever regulatory changes are considered as a result of this and other inquiries, we would argue that the emphasis should be on risk. That is, the regulatory changes should focus regulatory effort to the parts of the sector where the associated risks are known to be higher. Different regulatory treatments should be applied to different types of buildings and different types of products. A product or installation attached to, for example, a multi-storey, a densely populated location, a hospital etc would attract a level of regulatory focus greater than a lower risk construction.