



PUBLIC ACCOUNTS COMMITTEE

**Inquiry into the management and oversight of the Perth Children's
Hospital project**

PLUMBING PRODUCTS INDUSTRY GROUP INC's SUBMISSION

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To Public Accounts Committee

Inquiry into the management and oversight of Perth Children's Hospital project

The Plumbing Products Industry Group Inc (PPI Group) appreciates the opportunity to provide comment in a general sense with respect to the inquiry with a particular focus on the often stated position that the likely source of lead contamination is the Watermarked brass fittings. Such comments were well made in the Building Commissions Final Report – Perth Children's Hospital audit, April 2017 and the Jacobs Perth Children's Hospital Synopsis of Potable Water System dated 21st April 2017.

The WaterMark Certification Scheme is a mandatory certification scheme for plumbing and drainage products to ensure they are fit for purpose and appropriately authorised for use in plumbing and drainage installations with a particular focus on ensuring public health and safety. The Scheme is now administered by the Australian Building Codes Board (ABCB) which has been established by virtue of an Inter Government Agreement (IGA) with all state and territory governments being signatories and apparently supportive of the mandatory WaterMark Certification Scheme. The Scheme has been in transition for almost 3 years with the so called new mandatory scheme to be launched effective 1st August 2017.

It is worth noting at this point that there has been no secret regarding the increasing incidents of non conforming building product, both nationally and internationally, with a number of Australian state and territory jurisdictions moving to address the issue with the Queensland Government perhaps taking the lead, introducing the Building and Construction Legislation (Non-conforming Building Products – Chain of Responsibility and Other Matters) Amendment Bill. However, while such a Bill has a place in ensuring the integrity of the built environment, it will not directly address plumbing product that has been certified as being fit for purpose but not compliant, which may well be the case with respect to those Watermarked brass fittings installed in the Perth Children's Hospital. Furthermore, any such initiatives to be effective need to be taken up holistically nationally not necessarily on a state by state basis.

The policing and regulatory control of WaterMark Certification comes under the responsibility of individual state and territory governments but is rarely policed as it is the

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licensed plumber who is lumped with the responsibility of ensuring plumbing product to be installed is WaterMarked. This is a significant anomaly in a mandatory scheme that is supposed to ensure that the products to be installed are fit for purpose and provide all of the necessary protections to ensure public health and safety in the potable water supply and sanitation systems in the built environment serving Australians. The anomaly becomes almost laughable when hardware stores, other retail outlets and online suppliers can sell plumbing product to uninformed consumers that is not WaterMarked and often is not fit for purpose. Plumbing products may also be sold through these channels which claim to be WaterMarked but have not been subject to the necessary checks and tests against the appropriate standards.

Even with the introduction of the so called new mandatory WaterMark Scheme under the administration of the ABCB the checks and balances required to ensure plumbing products maintain their integrity are grossly inadequate. A manufacturer or supplier having made an initial application for WaterMark certification may provide a “sample” product from a production run for testing which if successful is issued with a WaterMark licence, and may then only be subject to a desk top (paper) audit until the term of the WaterMark licence expires. In the USA and Europe a twice yearly factory audit has become the norm to ensure the integrity of the production process and supply of raw materials is consistent in the manufacture of plumbing product. Unless a regime such as this is followed with the increase in the use of recycled materials, particularly lead, sometimes sourced from old car batteries, it is little wonder that the lead content in brass can be extremely variable.

The increased incidence of lead in USA potable water supplies has moved that country, through the Environmental Protection Agency to set a goal of “zero” parts per million of lead in drinking water.

“Lead is a neurotoxin that can cause long-term health effects, even at very low exposure levels. No amount of lead in children's blood is considered safe by any health authority. The USEPA has set a goal of “zero” parts per million of lead in drinking water because no safe level of exposure is known. And as of 2014, it became illegal to install new pipes, pipe fittings, other plumbing fixtures and solders that are not “lead free” (i.e., containing more than 0.25% lead).”

This has led to an amendment to the Safe Drinking Water Act to reduce lead in drinking water, see below quote;

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Reduction of Lead in Drinking Water Act”.

“(d) DEFINITION OF LEAD FREE.—

“(1) IN GENERAL.—For the purposes of this section, the term ‘lead free’ means—

“(A) not containing more than 0.2 percent lead when used with respect to solder and flux; and

“(B) not more than a weighted average of 0.25 percent lead when used with respect to

the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.

It is understood that Canada has followed the US lead in this regard largely through concern that product destined for the US market would be dumped in Canada. Given the timing of this and the relatively recent reports of increased lead in Australian household potable water supplies this fear may well be justified.

The PPI Group has been advocating for sometime that with the globalisation of markets, online sales, bulk purchases of plumbing products by builders and developers based on price alone, the threats of misrepresentation and fraud with respect to supposedly WaterMarked product has increased dramatically.

The PPI Group have strongly advocated that the Building Minister's Forum (BMF) and the ABCB should take immediate steps to introduce point of sale requirements for plumbing products required to be WaterMarked under this mandatory scheme, ensuring that consumers, suppliers, retailers, wholesalers and the supply chain are well educated and understand their responsibilities and the value that this system of certification provides in ensuring that the products covered are fit for purpose and protect community health and safety. At the moment WaterMark is not well promoted: indeed, it is such a well kept secret that many in the plumbing sector do not know of or understand the value or benefit the certification scheme provides.

It is critical that state and territory government regulators immediately support point of sale for the WaterMark Scheme when it not only ensures products are fit for purpose but positively deals with health and safety issues for consumers. Point of sale requirements are a critical path which has assisted in the acceptance and education of consumers with respect conforming and compliant products to be used In Australia. A great example of the value to point of sale adds can be found with respect to water efficiency and labelling requirements for some plumbing products and white goods the Water Efficient Labelling and Standards scheme (WELS) does just that and is fully supported by all state and territory governments.

WELS is a federally based scheme that requires certain water-using products to be rated and appropriately labelled. **WELS has a mandatory point of sale requirement** under the Water Efficiency Labelling and Standards Act 2005 (the Act), meaning these products cannot be legally sold in Australia without a WELS Label.

The Water Efficiency Labelling and Standards (WELS) scheme was established in 2005 under the Commonwealth *Water Efficiency Labelling and Standards Act 2005* (the WELS Act). It is a **cooperative legislative** arrangement with states and territory governments.

The objectives of the WELS Act are:

- to conserve water supplies by reducing water consumption;
- to provide information for purchasers of water-use and water-saving products;
- to promote the adoption of efficient and effective water-use and water-saving technologies.

The scheme aims to address these objectives by requiring registration and labelling of specified products to show their water efficiency and through setting minimum water efficiency standards (WES).

The WELS scheme is supported by complementary state and territory legislation, ensuring consistent national coverage. It is administered by the Commonwealth on behalf of all jurisdictions, with key managerial decisions considered by the WELSOG (the WELS Officials Group, comprising representatives of all WELS jurisdictions). WELSOG and the scheme are in turn overseen by a Ministerial Council.

The Intergovernmental Agreement (IGA) (2005) provided the mechanism for the cross-jurisdictional establishment of the WELS program. The Commonwealth and all states and territories were signatories to the agreement, and agreed:

- that a WELS scheme, including minimum standards, should be established in order to conserve water;
- the scheme should be nationally consistent, and would involve complementary legislation put in place by all jurisdictions in order to ensure that it applies to all persons;
- to a funding mechanism for the scheme, whereby the Commonwealth would provide for the establishment of the scheme, registration fees would provide for cost recovery, and that all jurisdictions would contribute additional funding for the operation of the scheme from 1 July 2005 as and when the need was determined by the (then) Environment Protection and Heritage Council (EPHC); and
- that the national scheme would be administered on a cooperative basis, with the Commonwealth having the role of regulator.

The IGA outlined key aspects of the desired legislation to establish the WELS scheme and established a notice period for consultations when a jurisdiction intended to amend WELS legislation, and for the Commonwealth when making determinations under its WELS Act.

The IGA also established a committee, comprising representatives of the WELS jurisdictions. Since the independent review of the scheme, that committee is now known as the Water Efficiency Labelling and Standards Officials Group (WELSOG) and has a role in managing the scheme, along with WELSAG and advisory group with industry representation.

If there can be this level of agreement between the commonwealth, state and territory governments over labelling arrangements for water efficient plumbing products, it must surely be possible where health, safety and well being of the Australian community are at risk with respect to non-conforming building and plumbing products!

Compliance of the WaterMark Certification Scheme (WMCS) has historically been the

responsibility of state and territory based regulators, with the scheme being only policed at the point of installation with licensed plumbers being responsible to only install WaterMark certified product where applicable. In relatively recent times this has led to increasing conflict with builders and developers frequently purchasing product from overseas suppliers by the container load based on price and avoiding the supply chain in Australia.

In addition many consumers are also purchasing product online and insisting that these products be installed by the plumbing contractor. Further conflicts arise as many retailers and hardware stores do not appreciate that plumbing product should be certified under the WaterMark Certification Scheme (WMCS) before they can be legally installed. There is no barrier to these retailers and distributors selling plumbing product to the public whether certified or not; often these sales are based on price and sold into the DIY market. This situation causes considerable market place confusion and frustration.

The installation of plumbing product is the responsibility of the installing licensed plumber and if product other than WaterMarked product is installed such non-conformance may not be identified until after installation. Point of sale requirements would also ensure that licensed plumbers are fully aware of their responsibility to install WaterMark certified product.

It is largely the industry view that to assist in managing the installation of conforming product certified under the WaterMark Certification Scheme (WMCS) and building products more generally point of sale legislation is essential. Point of sale requirements ensures that the supply chain is educated and understands their responsibility in the sale of products and that the consumer/customer/client is also able to access product information to assist in purchasing choice, rather than on price alone.

Given the increasing incidence of builders and developers purchasing non-conforming product directly from overseas suppliers point of sale requirements could assist this process where such requirements are addressed for;

- Products manufactured internationally at point of import
- Compliance and enforcement at point of sale through retailers etc
- Project/building completion certification

Point of sale requirements ensure that product manufacturers provide necessary information/evidence to the Australian market that products are fit for purpose and meet the appropriate standards prior to sale.

It has been a point of contention for sometime by industry that while WELS is point of sale there has been resistance from a number of government jurisdictions to the WaterMark Certification Scheme being changed to point of sale, particularly when one considers the possible health and safety consequences in the community that could occur from faulty plumbing products. Yet a labelling scheme such as WELS is given a status above community health and safety by all Australian governments.

Areas of significant risk in plumbing products and systems and the challenges such risk provide to public health are demonstrated by the following examples:

- Loss of life through the outbreak of severe acute respiratory syndrome(SARS) in Hong Kong; Amoy Gardens in Hong Kong, a city boasting significant population densities living in high-rise apartments. Amoy Gardens, a 33-story residential apartment complex built in the 1980s, saw 321 people infected by SARS resulting in 65 deaths.
- Spread of the infectious organisms, Cryptosporidium and Giardia, through the Sydney watersupply;
- Reported cases of water borne disease outbreaks in the USA causing some 443,000 reported cases of illness; and
- The World Health Organisations (WHO) concerns with respect to substandard plumbing leading to legionellosis and other water borne illnesses.

In addition to the above and the situation at PCH, a study by Macquarie University last year involved the sampling of potable water drawn from the household taps of 212 homes across NSW, and detected lead in some 56% of samples; some 8% of the total test samples exceeded recommended lead thresholds of 0.01mg/L of water, as stipulated in the Federal Government-approved advisory document *Australian Drinking Water Guidelines*.

It is understood the primary problem can be attributed to lead leaching from tapware and associated fittings which in the majority of cases was less than 12 months old. This is a cause for concern given our knowledge of the manufacturing process and the use of scrap material in the manufacture of such products and US and Canadian reductions in the lead content of brassware..

The authors of the study concluded, that the results of this study showed a long term, ongoing exposure pathway to environmental copper and lead through drinking water. Copper and lead detected in samples from across New South Wales are an ongoing concern as they pose a risk of exposure for consumers, especially infants. The widespread distribution of samples with elevated copper and lead concentrations demonstrates that this is not a spatially isolated problem, and that domestic supplies across Australia are likely to be subject to similar issues. The laboratory leaching study of new taps demonstrates that commercially available plumbing products pose an appreciable source of exposure to known toxic contaminants. Overall, this study highlights a dearth of knowledge in the community about the potential risk associated with exposure to copper and lead via drinking water, a problem exacerbated by the availability of predominantly lead containing products for household plumbing.

One of the authors of the report, Paul Harvey, a Postdoctoral Researcher in the Department of Environmental Sciences at Macquarie University says this problem is both not new, and more widespread than people realise.



"Our data shows that new taps in Australia are generally non-compliant for lead concentrations at the time of installation and this is reflected in the elevated concentrations of lead in drinking water at kitchen taps across the country," Harvey says.

"Consumers can readily purchase off the shelf products that contain very high concentrations of lead, up to 4.5 per cent, compared to the maximum allowable USA value of 0.25 per cent, with no warning labels or indication of potential hazards."

Given the public health issues associated with inferior plumbing products point of sale requirements are essential to ensure effective compliance with the WaterMark Certification Scheme. All plumbing products that directly interface with the potable water supply should be covered.

Yours sincerely

Stuart Henry
Executive Director
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PPI Group is the premier voice of manufacturers and importers of plumbing products used in the Australian plumbing industry. The Association is well represented on all relevant plumbing industry Australian Standards Committees and other national committees and groups. PPI Group members are committed to the development of the plumbing industry in Australia and work together to deliver quality, safe products, fit for purpose for use by industry and consumers for their benefit and the safety of the wider community. A number of plumbing product manufacturer members of the PPI Group are also exporters of product manufactured in Australia creating additional employment opportunities and earning export dollars.

Key objectives of the PPI Group are;

- To promote, encourage, foster and develop the Plumbing Products Industry Group in the interests of its members in Australia and New Zealand.
- To promote the establishment and maintenance of high standards of quality, service and ethics throughout the industry.
- To place before Industry, Government, Statutory Authorities and others in Australia, New Zealand and elsewhere, the policies and views of the Association.
- To take a pro-active and interactive role in matters connected with regulators, Standards Australia/Standards New Zealand, Water Authorities and like national or state bodies and authorities in Australia, New Zealand and elsewhere.
- To foster a cooperative and mutually supportive effort in improving the export potential of the members of the Association