

Mr Ralph Martin

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The Secretary, Inquiry Committee,  
Ms Samantha Mannette  
House of Representatives  
Standing Committee on Environment and Heritage  
PO Box 6021  
Parliament House  
CANBERRA ACT 2600

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Dear Ms Mannette

**RE : "Inquiry into the regulation of plumbing product quality in Australia"**

**ABSTRACT**

I welcome the opportunity to forward comments on the topic of the regulation of plumbing product quality in Australia.

The following notations are based on personal experiences from working within the framework of a regulatory authority, having been actively involved on Committees for the development of Australian/New Zealand plumbing Standards and Codes and from the perspective of a consultant to a manufacturer of plumbing products since retirement.

It is noted that the Terms of Reference are honed into a segment of the plumbing industry from which the most frustration emanates.

It is of importance to note that the regulatory component impacts into two areas, 'installation' and 'manufacture' with considerable overlap between the two fields.

The quality of a plumbing installation for example could be seriously compromised if the many individual 'high quality or otherwise products', that make up an installation, are not assembled correctly.

A factor which is seldom, if ever, built into manufacturing and or installation Standards and Codes is the customer's expectations, in short apart from performance : How long will the product last in service ? What is a reasonable time ?

The term “consumer protection” takes on a very shallow meaning when aligned to what a consumer regards as a reasonable life for a product and or a system comprising many individual products/components.

A simple test is to ask yourself : “How long would you expect the sanitary drainage system to last in your own home without major maintenance ?” A standard reply from home owners asked that very question was : “At least fifty years.” Often followed by : “or longer”, and or “for the rest of my life”. For tapware and water pipes thirty years was considered a reasonable time. However those who had experienced such problems as leaking pipes in walls and under or in concrete floors, and who had been through the exercise of battling with insurance companies and putting up with the inconvenience of waiting for tradespeople to repair the immediate and subsequent damage - They were firmly in favour of such service pipes lasting for the life of the house.

A manufacturer’s perspective is usually much different to that of a consumer, they are in business to sell product, more sales, more profit. Therefore the quicker the product breaks down the more sales they can anticipate in the replacement market.

In addition to the above it is a certainty that many such drainage systems and service pipes will fail in less than ten years because relevant environmental conditions were ignored. “Environmental” as in embracing different but related applications : The manner in which the end user intends to use the system/service ; and the natural environment (surrounds) into which the system/service is installed.

One of the major problems in the building industry today is that there are many Standards and Codes which cover the construction of an average home, putting industrial and commercial constructions to one side. And to compound the problem, from the plumber’s perspective, there is not a single Standard or Code that encompasses ‘all the necessary requirements’. The Plumbing Code refers to other Standards and for a tradesperson to keep up to date he/she would need to have a sizeable library at hand at all times and a memory like a computer. As for the cost of maintaining such a library ! Well, “The user shall pay !!”

Many issues, events that have caused problems, can be levelled at the lack of communications between the respective parties involved, deliberately on the part of some builders. Many sub-contractors have fallen victim to unscrupulous principals and found themselves locked into financial dilemmas for which they are held to ransom.

Site findings and or relevant specifications from professional bodies are often withheld from those performing the actual work. And should things go wrong ! The blame is quickly directed back to the sub-contractors with the caption : “You should have known”.

The overlapping requirements from one Standard or Code to another are not always expressed. And to say it is the responsibility of the tradesperson, he/she should know all these things is being unreasonable, their skills are primarily of a technical nature. The publication of a pocket size check list/booklet with some general open directives could be helpful to the industry at all levels and across trades. Unfortunately it is the builder who

holds the purse strings and all too often it is the one at the end of the line, the tradesperson, who is short changed with little, if any, redress.

**“A Federal Inquiry into the conduct of builders nationally is long overdue.”**

Returning to the topic. I have been perusing articles that I have collected over the years and I came across an article published by **CHOICE** in **December 1992**. Unfortunately the quality of the copy is poor or I would have had it scanned in for you. Your library would surely have the document on file. I strongly recommend that all the Committee members read the article, it is on pages 28 - 31. Although nearly fifteen years old the content is still current. The title **“THE AUSTRALIAN STANDARD FLAG OF EXCELLENCE OR COMPROMISE ?”**, sums the situation up reasonably well.

From my experience I would have to agree with the summation “COMPROMISE” and often a poor one at that, is all too frequently the outcome.

The definition of an “Australian Standard,” under the auspices of Standards Australia for plumbing products has been presented by many as follows :

“A Standard is at best the ‘absolute minimum requirements’ as perceived by a group of individuals, usually with a commercial or political agenda in mind, by the process of consensus within the shadow of a Committee.”

And what a slow process it is !

The resultant documentation from such Committees, be it a Standard or a Code, is regarded as sacrosanct by those in the hierarchy of ‘users’ within the system, and most certainly for the legal profession, be the Standard or Code technically sound or otherwise. For the majority of large manufacturers these minimum requirements are now the ‘norm’.

In bygone days when competition was not so rife and the cost of materials was not scrutinised by accountants such things as material thickness was secondary and products were often quite robust. However with the aid of modern technologies manufacturers can now produce their wares consistently to extremely close tolerances in accordance with ‘the absolute minimum requirements of the Standard’.

In the last twenty years “fitness for purpose” has taken on a new dimension and the “life expectations” of products and services have also changed. “Are the present ‘minimum Standards’ adequate for plumbing products?” A consideration seldom, if ever, discussed by the respective Committees if the truth were to be known.

Should something breakdown within the first twelve months from the completion of a project it is the tradesperson and manufacturer or his/her agent who are first involved by the owner. Seldom if ever does the outcome of such encounters go back to the Committee. It would seem that the ethos of “Risk Management” and “Quality Assessment” are now very finely aligned at the level of tradesperson and manufacturer.

Unfortunately the incident of failures beyond the first twelve months of the completion of a project seldom if ever come back to the “Committee” either. The involvement of other

parties and site conditions tend to smother such feed-back. The client wants the problem fixed ASAP, and they would be quick to raise objection to the tradesperson charging them for the time to write out and send off a "Defective Product Report" to the respective Authority. To the client, resumption of their previous life is foremost in mind. And, naturally enough, the relevant Standard or Code Committee would not be interested in verbal feedback unless the problem was being espoused from the broader community or perhaps from the local or national media. Frequently documented evidence is treated with suspicion and distrust by those in power within some such Committees.

Such being the case many efforts to change what are considered decided weaknesses in the respective Standards or Codes can take years before they are implemented, many are simply glossed over or put to the bottom of the stack to be forgotten. Persons trying to implement such changes quickly become disillusioned and eventually abandon the cause. Feedback or progress by Standards Australia in such matters border on negligible.

To be fair this is understandable in the knowledge that the respective Project Managers, responsible for such communications to the public/industry are or have been in the past, absolutely bogged down trying to work through several projects at the one time and sort into order incoming and existing documentation within deadlines often set by others. Standard Australia provide for their services and with it is allegedly said, adequate support ? Perhaps times have changed !

In short it is suggested that the workload imposed on Project Managers has been grossly underestimated or simply ignored by senior management. Persons undertaking the role of a Project Manager must have a commitment to the job, good PR skills and preferably some relevant background experience and general knowledge of the subject matter to hand.

As with any enterprise without the appropriate resources the objective, in this case the development of reputable Standards and Codes for the betterment of and the well being of the national community, will be difficult to achieve.

**Granted the cost is always a concern.**

Needless to say it is of little comfort to the community to read that Standards Australia have made a sizeable profit if their undertakings to the Australian community and the respective industries , to whom they are technically responsible, have not come up to expectations.

In addition to the cost to Standards Australia there is a much higher cost imposed upon the principals of the representatives to the respective Committees, i.e., the Committee members. Often it is said that there is a lack of interest in developing Australian Standards and Codes. I say that it is essentially the costs involved. Many individuals, representing small industry groups or small manufacturers, would be interested in attending if their respective company or industry group could afford the expense.

By default one could say that the body of membership to the Committees, involved with plumbing products and installation Standards/Codes, are monopolised by the major water authorities and large manufacturers, often under the cloak of representing an industry

group or body. It is not uncommon for the same people to be serving on different Committees for allied Standards under the control of different Project Managers. In consequence the same level of stagnation emanates across the working level of the respective Committees. On the credit side, in some instances, this brings about a level of uniformity but it also exhibits a “closed shop” philosophy to the onlooker.

In addition to all of the above there exists a major shortfall in communications between Committee Project Managers and Committee members with like groups who may be working on allied building Standards and or Codes which have a significant impact on the activities relevant to on-site plumbing.

The big picture must be kept in view. Co-ordination across the frontiers, the need for uniformity, nationally and internationally, and the ongoing interaction between Committees developing Standards and Codes with common project objectives, must be pursued with determination within the realm of Standards Australia.

### **COMMENTS ON TERMS OF REFERENCE ( 5 )**

“The committee will inquire into the regulation of plumbing product quality in Australia, examining in particular :”

#### **1 “the appropriateness and effectiveness of the current plumbing quality regulatory arrangements”**

( As stated previously there are two disciplines each overlapping and a major component to each other. Products as individual items and the methods by which they are put together as a system. An inferior product could cause the failure of the system ; and the poor assembly of the products which make up the system, without due care and guidance, could also cause the system to fail. )

#### **PLUMBING PRODUCTS**

“appropriateness” - For the health and safety of the community and the environment it is appropriate for uniformity at all levels of the industry and to sustain these objectives regulations for the governance of the quality of plumbing products must be upheld.

“effectiveness” - The regulatory arrangements are only partially effective. Due largely to the costs involved to monitor and or inspect installations. ‘Point of Sale legislation’ would be of great assistance in the prevention of unauthorised plumbing products coming onto the open market. South Australia (SA) was the only State in Australia who had such legislation in place up to the early 1990’s. However when the Trans Tasman Mutual Recognition Act came into being it overrode the “Point of Sale legislation”. ( It may still be on the statute books in SA but in a redundant state. ) It was extremely effective at bringing retailers and wholesale merchants into line. No prosecutions were effected to my knowledge as the need did

not develop to that stage. The system of certifying plumbing products system, the WaterMark Scheme, is a creditable scheme but expensive to maintain. It is easily circumvented by large merchants/retailers importing like product from unlicensed overseas manufacturers. These products are generally considerably cheaper and fit for purpose, on observation, but do not bear the regulatory certification mark, the "WaterMark". Ready access to these products, by the public and trade alike, for repairs and or new installations is possible at major retail outlets across Australia. Sales are focused towards the DIY handyman/woman. To my knowledge there is no restriction on the importation of unauthorised plumbing products. The only control, minimal at best, is that such items are not legally permitted to be used on private property for connection into or onto service conduits provided to or from the respective authorities infrastructure, eg, water or drainage service connections. Rainwater systems and stormwater systems are exempt.

Digressing slightly : There are often two sides to a story and one such major retail chain has for years been importing a line of unauthorised plumbing fittings which are structurally far superior to certified 'like fittings' made to the "Australian Standard". The dimensions are consistently better too. So, in all honesty, given the choice : "What would you prefer ?" The manufacturer openly admits that the Australian certification system to them is a waste of money. They know their product is far superior to the minimum requirements set out in the Standard. However they prefer to pass on the monetary savings to their customers. The material complies with NSF requirements. - Food for thought !

## PLUMBING INSTALLATIONS

"appropriateness" - As stated previously for the health and safety of the community and the environment it is important to have regulations, in the form of installation Standards and Codes. Such national uniformity also assists in the development of good work practices, trade skills and the integration of such tradespeople across the nation.

"effectiveness" - The regulatory arrangements are only partially effective. Unfortunately the withdrawal of inspection services, down to 5-10% of registered jobs, in favour of self-certification, whereby the tradesperson personally certifies his/her own work as complying with the respective Standard/Code, has been a national failure. The incident of builders forcing tradespeople to take "short cuts" has increased beyond sight. Any semblance of "consumer protection" has all but disappear too. Resources must be put in place in order that inspectorial services can be reintroduced. The cry of 'too much consumer protection' is hollow. Especially when one looks, in depth, into the domain of new houses. Shoddy plumbing is as

common as shoddy work in the construction industry. Who wins and who loses. The winners are most certainly the legal fraternity the loser in most cases is the new home owner who generally has to go further into debt in an effort to have the defective work rectified. What about the builder? Those who cause the most trouble have a knack of avoiding just about everything by passing the blame onto others. In addressing the issue of plumbing : In general more than 95% of plumbing work is out of sight, buried or built in. For the regulatory component to become effective it is considered that full inspection of the critical elements of all plumbing work is warranted.

## 2 “scale of environmental benefits from controlling plumbing product quality”

The term “scale” generates uncertainty as to what is actually meant.

The focus is then directed to :

“environmental benefits” - Moving back to the essence of this assignment.  
“controlling plumbing product quality” - The fundamental need for “regulation” is for the maintenance of the health and safety of the community.

If one were to turn the clock back a mere fifty years we had lead water pipe connectors, waste pipe and drainage pipes and fittings of all types and sizes, copper alloy (brass) pipes and fittings, terracotta (earthenware pipes) and cast iron and steel pipes and fittings.

In addressing the issue at hand the environment is secondary. With the exception of cast iron and steel pipes and fittings all the other materials were associated with toxic substances which had the potential to leach out into the water supply or environment.

When ingested, especially at high levels, these substances had a deleterious affect upon the health of individuals and the community.

Standards for all plumbing products conveying potable (drinking) water require that such products do not contain toxic substances and are non-carcinogenic. The Standard for materials in contact with potable water is constantly being reviewed to refine test methods and how best to assess new materials.

Substances such as lead, cadmium and arsenic are readily leach out of their host material into water. They are now prohibited substances in certified materials used for the conveyance of potable water.

In the past these substances, by way of our waste water carriage systems, found their way back to treatment plants and ultimately seawards to pollute the environment.

The introduction of Poly Vinyl Chloride-Unplasticised (PVC-U) drainage and water pipe systems in the mid 1950's compounded the problem and with lead being used as an integral lubricant for the manufacture of these products. Calcium-zinc lubricants are now used instead of lead.

The sale of unauthorised plumbing products from local or overseas sources could raise health and or environmental concerns.

### **3 “trade implications of controlling plumbing product quality”**

“trade implications” - Generally speaking the major suppliers of plumbing products to the trade act responsibly by ensuring that their stocks do in fact have WaterMark accreditation.

Needles to say the suppliers also have lines of stock which are intended for rainwater and or stormwater applications. They do not require certification and in consequence are considerably cheaper.

Many of these uncertified water fittings do get used in potable water supply systems by default and often on purpose by tradespeople who know better.

With the absence of full inspection services many of these wayward tradesmen/women consider that there is minimal risk involved in being caught-out. No doubt the client is charged the price of a certified product so they take in a little more profit.

Coming back to the issue of health and safety it is considered that all products in contact with rainwater, especially where it is to be used for human consumption, should be certified as being free of toxic substances.

Rainwater is more readily able to absorb heavy metals such as lead and cadmium because the water is in such a pure state.

From a manufacturers perspective the marketplace is controlled by supply and demand. Retailers are generally aware of the rules albeit that they often claim ignorance as protection.

The ongoing education of retailers and tradespeople and the resumption of inspection services on critical elements of all plumbing work, in particular on-site final inspections would be of great assistance to the end user, the home owner.



#### 4 **“potential improvements to the plumbing quality regulatory system”**

“potential improvements” - As stated previously it is considered that the weakest link in the regulatory system is the time it takes to progress submissions into and out of Committees under the auspices of Standards Australia.

Granted a procedure of protocol must prevail however it is considered that the procedure is too rigid in its application.

More resources are required as a matter of urgency just to bring the business of Standards and Code Committees up to date.

More resources are also required at the level of auditing manufacturers (under the auspices of SAI Global). It is also considered that the fees associated with the licensing of small volume manufacturers is excessively high.

The cost, at trades level, to keep up to date with amendments to Standards and Codes of practice is also considered excessively high. A system of government subsidies would be worthy of consideration.

**The publication of a pocket size ‘check list/booklet’ with some general open and brief directives into the interaction of plumbing Standards and Codes with allied trades and professions on building sites would be helpful to all levels of the industry. The plumber is amongst the first of the tradespeople on-site and often the last off-site.**

Such a publication would be extremely supportive to sub-contractors who are often bullied into doing work in a manner contrary to acceptable work practices.

#### 5 **“the appropriate level of government to administer plumbing product quality regulation, that is, the states (as is now) or the Commonwealth.”**

This is an area of controversy and allegedly, power mongering.

Without question it is considered that the administration of plumbing product quality, be it at the level of product or installation, should be in the control of the States/Territory. Each should have a single regulatory body and whether that “body” is called the Power and Water Authority or The Department of Health is immaterial as long as the structure is accountable to the respective State or Territory Government.

Allied to that statement it is acknowledged that for uniformity nationally the governance of the regulatory controls for product Standards and Codes, that define acceptable work practices, is the responsibility of the States and Territory collaboratively.

Commonwealth management of the sanitation and well being of the community would be considered tenuous at best. And it is considered that the distribution of finances to operate such an extended enterprise would be totally unworkable and a political impossibility.

The licensing of tradespeople is important for the maintenance of the overall system and the qualifications of such applicants should be thoroughly assessed before a license is issued. There is also strong evidence that such licences be reviewed every five years and renewal granted only upon attendance at a short 'refresher' education course.

On the negative side the licensing system has very little creditability when it is operated as a separate identity to that of the regulator. Granted it does give legal definition to the licensed party. Unfortunately there is seldom if any meaningful disciplinary action taken against licensees or as applicable, to the parties to whom they are employed, when the licensee has been found in breach of the Standards or Codes of practice. Cases of a general nature appear to be disregarded and those of a serious nature seldom give rise to a just outcome. There is seldom a penalty of significance issued to an offender therefore it does not become a deterrent to others. As stated previously it is the home owner who is almost always the one who loses.

## **CONCLUDING COMMENTS**

It is hopeful that the preceding notations and those herewith are of some value.

There are many more issues within the structure of Standards Australia and their ancillary organisation SAI Global which could be debated.

Some say that we should scrap our Australian Standards and Codes and adopt recognised International Standards (ISO). This I would strongly object too. In general it could be said that most of the Australian and New Zealand Standards are better than overseas Standards as they have evolved to suit our climatic conditions.

Moving into a realm of concern to the few remaining manufacturers of plumbing products in this country is the cost of setting up and maintaining Quality Assurance Systems for the governance of manufacturing processes.

All would agree that in principal such systems of control are of benefit to the manufacturer and the end user.

Equally so it is considered that the quality of a product is not always enhanced by the paper trail generated as a consequence of maintaining a Quality Assurance/Control System as dictated by the owner's representative of the WaterMark insignia/brand.

Plumbing products i.e., fittings are not always branded with a serial number and in consequence once the product has left the place of manufacture it is the manufacturer's name that is used by the trade and public alike if there are problems.

Even manufacturers licence numbers mean little to those at trade level. The presence of the “WaterMark” on a product merely implies ‘to those in the know’, that the product was allegedly made by a manufacturer with a recognised Quality Assurance System in place.

Such marking are of more value to the Regulator who can deem the product a “certified” fitting even if there is an unwanted hole through the side of the fitting. Naturally recourse to such events would be direct to the manufacturer or his agent. Neither the Regulator or the Auditor of the Quality Assurance System would get involved. The Auditor might get to see a record of the event in the manufacturer’s records if they could make the time to fill out the paperwork. ( A recall for a defective component in a motor vehicle is an entirely different scenario.)

To summarise it is considered that the quality control documentation required in support of the manufacture of plumbing products is often pedantic to the point of excessive and does not support productivity nor does it provide an advantage in the marketplace beyond providing a national mark ( WaterMark) on each product for the benefit of the respective Regulators.

It is the manufacturer who is responsible for the product and the plumber/tradesperson who is responsible for its installation. And at the completion of the undertakings it is the home owner’s expectations that the said works will last the life of the structure !

**END OF COMMENTS**

Yours faithfully.

Without prejudice.

RALPH MARTIN