

CHEAP, NOT CHEERFUL:

THE PITFALLS OF INVESTING
IN LOW-GRADE DRAINAGE



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INTRODUCTION

In a recent report conducted by The Australian Industry Group, The Australian Steel Institute (ASI) commented:

“The construction products industry in Australia is faced with a choice: it can follow a path of the lowest cost denominator in which case be exposed to the worst in quality the world can produce, or, it can implement product conformity systems similar to what is in place in most of the developed world that inform the client of achievement of levels of quality compliance benchmark.”¹

With 95 per cent of respondents in the steel product sector reporting non-complying products in their market, an influx of substandard products to areas like drainage and plumbing is glaringly apparent.²

Whether the project is a domestic property, a multi-residential development or a hospital, costs obviously need to be kept low across a number of variables. Drainage can often feature far down on the list of priorities and while cutting corners can be

tempting, shaving margins off by buying cheaper, low-quality products will end up costing more in the long run – and not just in a monetary sense.

Currently the importance of choosing compliant and conforming products in construction is regularly discussed in the media and within the industry. The most dramatic examples of the failure of substandard products – such as the Melbourne Docklands fire and the Infinity cable recall – are widely broadcast, yet the range of implications involved in choosing cheaper products remain largely underreported.³

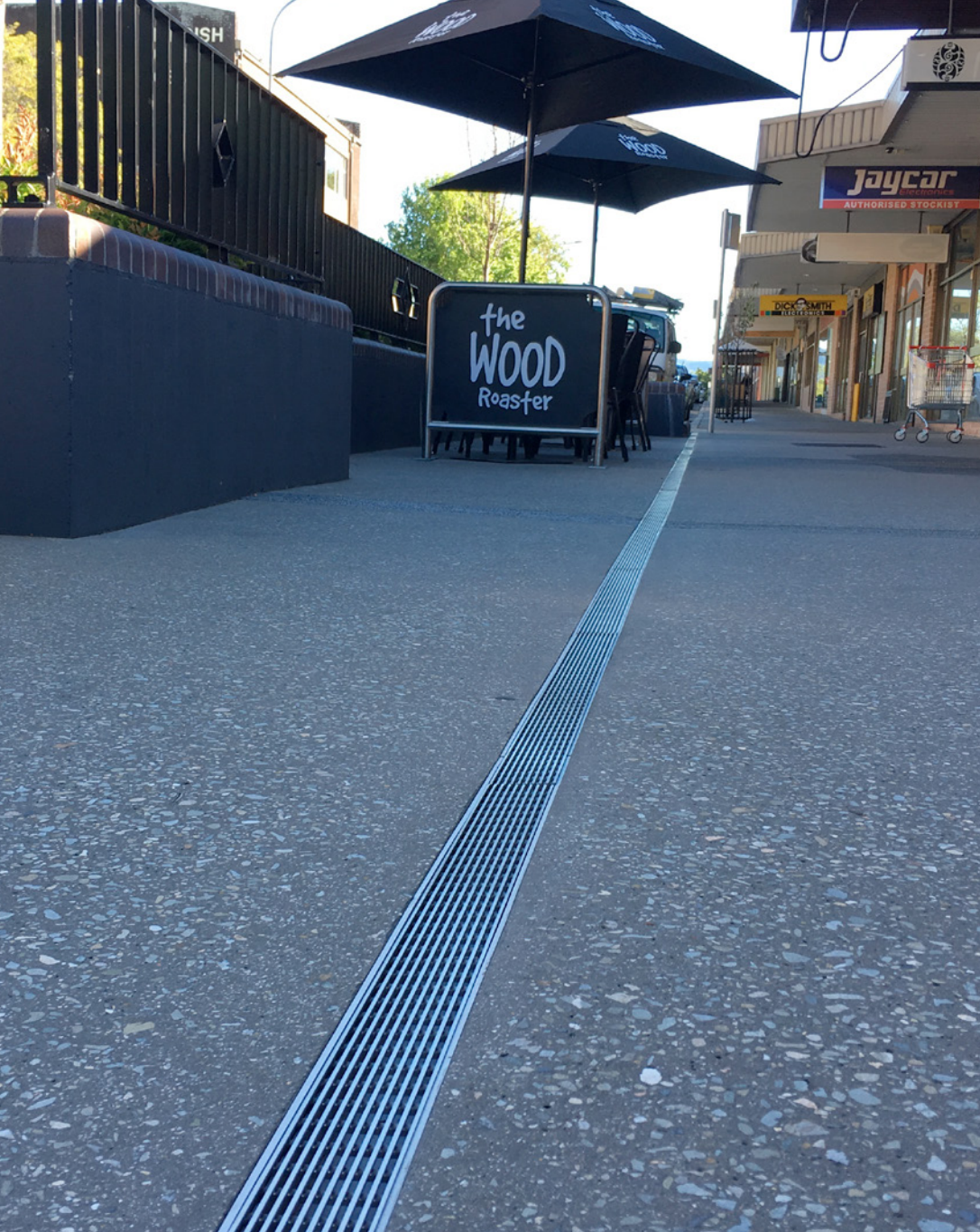
In Australia, standards and regulations are becoming more and more rigorously tested in the construction sector, but the pros and cons of individual products are often difficult to establish. The Plumbing Code of Australia does not advise on particular brands or products leaving the onus of checking a product’s suitability firmly with the consumer.⁴ A low price point is a hugely attractive feature but what elements do these ‘bargains’ conceal?

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THE HALLMARKS OF SUB-STANDARD DRAINAGE

Like any product, the cheaper the goods, the less room there is for flexibility and adaptability. The nature of cheaply produced objects is that they are manufactured in greater quantities meaning that they are much more likely to take on a 'one-size-fits-all' approach. Choosing the cheaper option will undoubtedly limit the adaptability of the products to specific jobs, projects and spaces. Even in cases where products have been certified, they may not be fit for purpose.

The sign of a superior product is one that has been tested, tested and tested again. Yet, research and development phases require expertise, time and money. The presence of a cheap price tag means that the likelihood of it being put through extensive and rigorous tests is slim. In the Australian Industry Group report, some respondents suggest round robin testing and peer reviews as a possible solution to the lack of testing currently taking place.⁵

Just as a reduced R&D process might result in oversights in a product's capabilities, a limited production period could mean

that less time will be dedicated to the finish. Whether the drains will ultimately be employed in high traffic areas or domestic interiors matters little – sharp finishes or unfinished welds will leave users, and construction workers, open to accidents and injury. A case study focusing on non-conforming steel and glass bridge truss highlighted certain non-conforming standards such as non-conforming welding types (fillet instead of butt welds), poor welding and finishing including undercutting (reduced wall thickness).⁶ While these elements formed only part of the overall failure of this particular project, the end result was rectification and rebuild costs that estimated at over \$800 000.⁷

Insurance Council of Australia CEO Rob Whelan further illustrates these damning costs in relation to substandard work stating that “Installing products that don't meet the required standards for their intended use may save costs for builders and developers, but detecting and removing them down the track can be extremely costly for owners, and potentially taxpayers.”⁸

THE LASTING IMPACT OF CHEAP ALTERNATIVES

Extra Cost

The lack of flexibility implied by inferior quality products will result in extra costs in the long run. By choosing a lower-grade product that cannot offer a range of applications, the consumer is limited in the type of environment in which the product can be employed. Inferior quality drains often fix the outlet in the centre of the appliance or solely offer fixed lengths. If existing plumbing does not have a corresponding centre outlet, the plumbing will need to be moved which will likely incur an extra cost. In a large project like a multi-residential building or a care facility, this cost will be hugely amplified. It is estimated that the average cost of rework due to non-conforming products is between 0.25 and 2.5 per cent of the overall contract value.⁹

Shorter lifespan

Cheaper drainage systems are more likely to employ 304-grade stainless steel meaning that the chances of developing rust over time, or depending on exposure, are greater.¹⁰ One of the key findings by the report 'The quest for a level playing field: The non-conforming building products dilemma' in relation to the steel

sector was that 'Non-conforming steel products and structures can increase the risk of personal injury to employees and has the potential to affect long term building and structure safety.'¹¹

Building Damage

The most successful drainage systems will be sleek and refined – going relatively unnoticed in most interiors or adding an elegant detail in others. The last thing drainage should do is have an impact on the building it is supposed to be supporting. If cheaper drainage is employed, aspects like insufficient flow rate may become problematic. A drain that cannot cope with the water capacity will result in an overflowing drain, which could lead to building damage.¹²

Repeating the job

As the issue of non-conforming and non-compliant building materials continues to gain traction, inspector and law enforcers are coming down hard on building professionals who ignore the rulebook.¹³ If a drainage system is found to be non-conforming and non compliant after it has been installed, inspectors can request that the product is removed and replaced.



THE VALUE OF CHOOSING HIGHER QUALITY

Stormtech is the original producer of linear drainage. As a company, it can offer years of experience that aligns with the best practice installation and maintenance methods as laid out in the Plumbing Code of Australia.

Choice

Stormtech provides a range of choices to suit a myriad of drainage possibilities. From linear shower drains to threshold drains, Stormtech can even design products to suit specific situations.

Material

In the case of drainage, sometimes the corrosion resistance needs to be higher in some project than others. This comes into play in areas such as chlorine environments and sea-front buildings. Stormtech's use of Grade 316 or marine grade stainless steel illustrates its dedication to a higher quality of material. Grade 316 is superior to Grade 312 and offers excellent corrosion resistance.

Compliance and Conformity

All Stormtech products are WaterMarked and have US UPC and Canadian CSA approval. Stormtech offers the only linear drain product in the world with Global GreenTag™ certification to help with GreenStar credits. Stormtech works with regulators, legislators, end users, trades and distributors to develop problem-solving products.



WHY SO CHEAP?

- Lack of testing
- Unfinished
- Limited flexibility
- Non-compliant



THE RISK WITH CHEAP ALTERNATIVES:

- Extra Cost
- Rust
- Damage to the building
- Repeating the job



“ Stormtech provides a range of choices to suit a myriad of drainage possibilities ”

STORMTECH

Stormtech is an Australian family business founded by John Creighton in 1989. In 2004 Stormtech won a Design Mark at the Australian Design Awards for its drainage design. Since 2006, Stormtech has been a member of the Standards Australia Committee and has been involved in the writing of the code linear drainage in bathrooms, and other plumbing products.

REFERENCES

- ¹ Willox, Innes. "The quest for a level playing field: The non-conforming building products dilemma." The Australian Industry Group (November 2013): 25 November 2016, <http://steel.org.au/media/File/29276_Quest_for_a_level_playing_field_AiGroup.pdf>.
- ² Ibid.
- ³ The Real Costs of Installing Non-conforming and Non-compliant Building Products (white paper) (Sydney: Architecture & Design, 2016).
- ⁴ "Non-conforming and non-complying products: what to know," accessed 23 November 2016, <<http://plumbingconnection.com.au/non-conforming-and-non-complying-products-what-to-know/>>
- ⁵ Willox, Innes. "The quest for a level playing field: The non-conforming building products dilemma." The Australian Industry Group (November 2013): p.33, 25 November 2016, <http://steel.org.au/media/File/29276_Quest_for_a_level_playing_field_AiGroup.pdf>.

*In experimental methodology, a round robin test is an interlaboratory test (measurement, analysis, or experiment) performed independently several times. This can involve multiple independent scientists performing the test with the use of the same method in different equipment, or a variety of methods and equipment.
- ⁶ Ibid.
- ⁷ Ibid.
- ⁸ "Non-conforming building products (NCBPS) causing serious concerns for consumers and the building industry," accessed 23 November 2016, <http://www.insuranceandrisk.com.au/non-conforming-building-products-ncbps-causing-serious-concerns-for-consumers-and-the-building-industry/>.
- ⁹ "How to achieve compliance for construction products: APCC releases guide," accessed 23 November 2016, <<http://www.architectureanddesign.com.au/news/how-to-achieve-compliance-for-construction-product> >
- ¹⁰ "316: The First Step Up," accessed 23 November 2016, <<http://www.assda.asn.au/technical-info/grade-selection/316-the-first-step-up>>
- ¹¹ Willox, Innes. "The quest for a level playing field: The non-conforming building products dilemma." The Australian Industry Group (November 2013): p.33, 25 November 2016, <http://steel.org.au/media/File/29276_Quest_for_a_level_playing_field_AiGroup.pdf>.
- ¹² Ibid.
- ¹³ "Builder fined \$45,500 for negligence and incompetence", accessed online 28 November 2016, <[http://www.vba.vic.gov.au/__data/assets/pdf_file/0008/38780/Builder-fined-\\$45,500-for-negligence-and-incompetence-VBA.pdf](http://www.vba.vic.gov.au/__data/assets/pdf_file/0008/38780/Builder-fined-$45,500-for-negligence-and-incompetence-VBA.pdf)>.

