ARE YOU AT RISK?
In November 2014, the Lacrosse Docklands tower caught fire from a single cigarette butt and the flames climbed from the 6th floor to the 21st in less than 15 minutes. Non-compliant cladding was the culprit for the disaster and caused more than $2 million worth of damage. It has also been reported that the same cladding has been used in multiple high-rise buildings across Australia. Thousands of lives are currently at risk.

The corporate building project at 150 Collins St, Melbourne, was built with sub-standard, imported glass. It is estimated to cost $18 million to replace half the glass, when the total project cost $180 million. If the builder had "chosen better quality local glass to begin with, not only would it have created more local jobs but it could have avoided this expensive mess... Sub-standard imported building products are flooding the market. Regulators are asleep at the wheel and too many developers are choosing cheap and dangerous over quality and safety" said Michael O'Connor, CFMEU National Secretary.

Between April 2012 and October 2013, ‘Infinity cables’ were bought and installed all across the country. It was determined that the cables were a non-conforming product and the material used would deteriorate over time, creating a high risk of electric shock from direct contact and the potential for fire. After Master Builders raised this issue with the ACCC and the Queensland Office of Fair Trading, a prohibition of sale was issued in October 2013. This has now been replaced with a product safety recall – meaning in certain circumstances, cable that has been used must be removed and replaced. It is estimated that around 40,000 households and businesses may have been affected across the country.

"Worryingly, we have seen one fire in a high rise residential tower which seems to have been aggravated by inappropriate cladding materials... A little more time invested in planning and design can save significant risk, worry and expense for all those involved.”

Phillip Greenham
Minter Ellison

Dodge dodgy practice

Although it is almost impossible to measure a common standard of quality, quality in its simplest form can be defined as what the client wants, at the price they are willing to pay. A survey\(^1\) found that 90% of building dwellers had been experiencing problems with building quality. Complaints include internal and external water damage, significant movement, use of sub-standard materials and a breakdown of structural elements. This level of dissatisfaction reflects the poor quality of buildings that exist today due to the failure to meet building standards. The examples on the previous page are only a few of the many cases out there and illustrate the severity of the issue that is affecting millions of Australians.

Do not risk using sub-standard or non-compliant products and practices as you will surely see yourself paying more than what you saved to fix it. Most importantly, you will be risking lives.

Quality documentation

*Source: Government as a Smart Client, Office of the Victorian Government Architects 2013

Quality does not need to cost

- In Australia the builder need not conform to Australian Standards unless they are cited in regulation or within the construction specification.
- A crooked wall costs more to construct than a straight one. If you don’t specify the quality of construction and finish, the client will pay for any rectification work, variation, time extension and increased maintenance.
- Clearly defined quality requirements reduce construction cost blowouts that result from re-work, redesign, variations and disputes. Poor documentation adds an estimated 10-15% to project costs.
- Good specifications increase construction productivity due to clarity of instruction. This results in less repairs and replacement and reduces the construction period due to reduced RFIs (request for information).
- Construction specifications reduce the risk of lengthy and expensive litigation as it is a clear record of what is needed and the level of quality desired.

In consultancy agreements and certificates, clients sometimes place pressure on consultants to give guarantees or “fitness for purpose” undertakings about the products they have specified, or about the overall design. Such clauses should be resisted because they are likely to exceed the cover of professional indemnity insurance, but more importantly because even experienced consultants don’t know everything about products manufactured by others.\(^2\)

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\(^1\) Survey finds building quality a big concern, ABC News
\(^2\) Wendy Poulton, Corporate Risk Manager - Planned Cover (Specification and Innovation)
There is a growing issue regarding non-conforming products being used throughout the construction industry and the heavy impact this has on the safety of building dwellers as well as the cost of re-work. A study done by the Ai Group found that a staggering 92% of respondents “reported non-conforming products in their supply chains”. The Victorian Building Authority found that “more than half of 170 buildings in central Melbourne failed to comply with the national building code”.

Ai Group’s Chief Executive, Innes Willox said “This raises important questions about quality and safety and it poses serious commercial challenges for the businesses that do play by the rules... Almost half of businesses surveyed (46%) reported lost revenue, reduced margins or lower employment numbers due to non-conforming products in the steel, electrical, glass and aluminium, and engineered wood sectors. The majority of the non-conforming products do not meet regulatory, Australian or industry standards”.

**Benefits of using conforming products and practices:**
- Risk minimisation.
- Quality assurance.
- Safety assurance.
- Economies of scale.
- Level playing field.
- Promotion of Australian jobs.
- Less re-work.
- Project delivery on time and budget.

92% of respondents reported non-conforming products in their supply chains.

Over 50% of 170 buildings in central Melbourne failed to comply with the national building code.

45% of businesses surveyed reported lost revenue, reduced margins or lower employment numbers due to non-conforming products...majority of the non-conforming products do not meet regulatory, Australian or industry standards.
ARE YOU LIABLE?
It is your responsibility

Quality cannot be managed if it is not defined. In construction, since there are many different parties who work on the same project, the level of quality must be clearly specified in order to achieve it. Poor documentation and low quality is compounded by re-work, variations, excessive meetings and time delays.

The ‘Specification and Innovation’ paper published by Planned Cover explains the importance of product knowledge and specification as part of professional practice.

“A consultant’s legal obligation for product specification is the same obligation that applies to every aspect of their services: They must act with the care and skill of ‘the ordinary skilled person’ in their profession - that is , with the competence that is ‘usual’ in their field. Failure to meet this standard is the definition of professional negligence”.

“So an architect who specified an inappropriate or non-compliant tile for general use probably could not shift liability for product selection onto the manufacturer”.

It is part of the architects role to have this knowledge, and this is assumed. Do not risk being liable for using sub-standard products.

Construction specifications are the most reliable way to meet technical standards. An up-to-date, comprehensive specification to support your contract and drawings is required to deliver a project with reduced litigation.

“The volume of legislation has risen from 18,000 pages in the 70’s to over 55,000 pages in the 90’s” (Gary Banks, Productivity Commission 2005). Maintaining up-to-date specifications are a lot of work. NATSPEC, which is owned by the design, build, construct and property industry, can provide these for you.

“Parties that do not turn their mind to including a robust and appropriate specification will do so at their own risk of legal disputation... In most if not all cases, poorly worded specifications will lead to legal complexities and, then, the possibility of long running legal cases. Adopting a clear specification increases the chance of an “on-time, on budget” completion.”

Keith Redenbach
Solicitor
It is important to understand that construction specifications are a means of risk management and quality assurance. They are a legal document.

When Parliament House on Capital Hill was first designed in the 1980’s, not using an Australian specification not only damaged the internal fit-out of the chambers of parliament, but also cost the architects $400,000 in rectification costs.

The architects, who won the design competition, were responsible for providing all architectural services only, not construction services. The interior of the chamber was to be made soundproof. Walls were clad with fabric which matched proposed seating coverings in the galleries and which gradually changed in shade towards the upper levels to represent, in the House of Representatives, the shades of forests – deep green at floor level, light green on the top. In the Senate Chamber, red would be used fading up to beige, representing the desert colours.

Contractors and subcontractors employed were responsible for sourcing the wool fabric that was to be used. Fabric needs to be tested for insects if manufactured to the Australian standard. However, one must still specify clearly the need for insect proofing. Although the specification had already expressed that the fabric would be made of wool or wool blend, the overseas specification made no reference for the need for insect proofing.

The fabric milled in Switzerland was not insect proofed. After a series of Bogong moth invasions, the fabric was no longer fit for use.

Dr. Ian Russell, a CSIRO scientist, inspected the damage and found that 40 to 50 of the panels in the House of Representatives Chamber were damaged beyond repair. There were large numbers of moth carcasses. In fact, he also found that the Bogong moths were not actually feeding on the wool. The Webbing or Clothes moths laid eggs in the carcasses of moths such as the Bogong and when the larvae hatched, they fed on their host carcass and then the wool.

If insect proofing had been specified, the above damage could have been avoided. Instead, the judge ruled that the standard AS 2001.6.1: Method of test for textiles – Miscellaneous tests - Determination of the resistance of textiles to certain insect pests, was not specified. Thus the architects bore rectification costs of $400,000.
“It’s incredibly important to manage processes, it’s incredibly important to manage information, to know what information is correct, what information is out of date, what is the current information. NATSPEC is very important because it is a common language and what it does is, it creates a whole specification database for the elements we’re proposing to build. Essentially working through NATSPEC, it provides you with a full gamut of opportunities that you can potentially face so it acts as an aide-mémoire as well as working through the documentation.”

David Sutherland
Fender Katsalidis Architects
ARE YOU PROFESSIONAL?
Reduce the pain of change

NATSPEC is the only national, regularly updated and comprehensive specification. It is designed to be customised to the user’s needs either according to each project or as an office master specification. NATSPEC is also widely used as an update service as it is updated every six months with the latest building standards.

NATSPEC also provides a wide range of TECHnotes and TECHreports to assist you with project delivery and building your specification. Visit www.natspec.com.au for a list of all the Technical Resources.

Easy steps: How to use NATSPEC

1. Choose the package that is right for you

NATSPEC offers a range of specialised specification packages to suit your needs. To request an information pack or to discuss your specification needs with one of our technical staff members, please contact us on 1300 797 142 or email mail@natspec.com.au

2. Select the relevant worksections for your project

Use NATSPEC’s online specification building software, SPECbuilder Live, to build your project specification. Choose only the worksections that are relevant to your project.

3. Customise your specification to suit your needs

Customise each worksection to include the details of your project. NATSPEC specifications also include Guidance Text and Prompts to help you along the way.
Benefits of NATSPEC

PDF versions
Within the Resource Materials section in SPECbuilder Live, there are pdf versions of NATSPEC’s worksections. These are fully searchable, allowing you to quickly locate information with the latest changes highlighted in yellow for your convenience.

Economies of scale
NATSPEC is a not-for-profit organisation owned by you through government and industry. Our team of 20 track and incorporate the latest changes to regulation, standards and industry information. Could you afford to have 20 of your staff dedicated to this function? We are indebted to the many organisations and individuals that freely provide their time in the development and review of worksections.

Current information
NATSPEC’s greatest value is its update service. Only NATSPEC can claim the accuracy and currency of its information. Not only are the worksections updated every April, to reflect the changes with the National Construction Code, the October update includes the latest status including Standards updates. Additionally, the NATSPEC website has monthly updates on Standards plus additional relevant information. Worksections are reviewed by the industry for the industry.

National
NATSPEC is a truly national Australian specification system. Its approach of incorporating feedback from many sources means that one specification system is relevant to projects spread across Australia.

Contractually “tight”
Tight specifications produce quality projects and minimise variations. NATSPEC places particular emphasis on producing contractually tight specifications by eliminating such risks as vague and contractually empty phrases, unnecessary duplication and reliance on out-of-date standards and reference documents.

Integrated
Because it is a comprehensive specification system, NATSPEC is integrated. Unlike specifications built by combining material from disparate sources, a project that uses NATSPEC’s integrated approach can eliminate the “holes” and duplication inherent in other approaches. That means it can reduce the risk of contract variations while also reducing the cost of coordination.

Branded Worksections
Branded worksections are technical worksections developed by NATSPEC in conjunction with a manufacturer known as a NATSPEC Product Partner. Each branded worksection is based on the associated NATSPEC generic worksection and shares the same classification number. It is a MS Word document Template which follows the NATSPEC style and can be customised.

Documentation - A unit of competency

The Architects Accreditation Council of Australia defines the four key units of competency for architects. These are design, documentation, project delivery and practice management.

Documentation is defined as the process of resolving, detailing and communicating an architectural project through all project stages. The modes of documentation include modelling, drawings, specifications and schedules that can be used in the construction, contract management and handover of the project.

Documentation material must be consistent with design objectives and budgetary constraints, and must conform to relevant codes and industry standards. Where supplied by consultants, documentation compliance must be verified.
GOVERNMENT DEPARTMENTS and clients prefer NATSPEC specifications so that they are assured of a baseline level of project quality. For over 40 years NATSPEC has been trusted to deliver quality results.

CONTRACTORS want to compete on an even footing and a NATSPEC specification means that the job will not be lost to someone who will cut the quality of construction. NATSPEC is independent and does not favour one party over another.

CONSULTANTS know that NATSPEC is comprehensive and provides a clear outline of the quality of materials and tolerance of construction required. NATSPEC specifications reduce the risk of litigation and support the team’s desire for successful projects. NATSPEC provides the economies of scale to keep consultants up-to-date.

PROJECT MANAGERS do not waste time clarifying project requirements as NATSPEC’s specifications are written in simple plain English without duplication or contradiction.

Stakeholders
- Air Conditioning and Mechanical Contractors’ Association of Australia
- Australian Council of Built Environment Design Professions
- Australian Elevator Association
- Australian Institute of Architects
- Australian Institute of Building Surveyors
- Australian Institute of Quantity Surveyors
- Chief Minister, Treasury and Economic Development Directorate (ACT)
- Construction Industry Engineering Services Group
- Consult Australia
- Dept of Finance (Federal)
- Dept of Finance (WA)
- Dept of Finance, Services and Innovation (NSW)
- Dept of Housing and Public Works (QLD)
- Dept of Infrastructure (NT)
- Dept of Planning, Transport and Infrastructure (SA)
- Dept of Treasury and Finance (TAS)
- Dept of Treasury and Finance (VIC)
- Engineers Australia
- Master Builders Australia
- Standards Australia

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