

It has been a long time coming, but a resolution to the duplication and problems of Australian Standard 1668.2 has finally been achieved. This May, the NCC/BCA Volume 1 will reference the new 2012 edition of the standard and, in doing so, consign the troublesome 1991 and 2002 versions to history. Sean McGowan reports.

# AS 1668.2 IS FINALLY RESOLVED

Since 1993, the National Construction Code (BCA Volume 1 – Class 2 to Class 9 buildings) has referenced AS 1668.2-1991 – *The use of ventilation and air conditioning in buildings Part 2: Mechanical ventilation in buildings* for deemed-to-satisfy requirements for ventilated buildings. This is despite a later edition, AS 1668.2-2002, co-existing alongside it for the past 10 years.

The fact that this latter version was never referenced by the Australian Building Codes Board (ABCB) in the NCC, and the duplication its existence represents, has been the cause of much consternation in the industry.

Indeed, the topic has continued to feature strongly in AIRAH membership surveys over recent years. Industry practitioners have urged the Institute to step in and help fix what has commonly been described as “a mess”.

The good news is a resolution has finally been achieved, with the BCA set to reference the new 2012 edition of the standard from May.

Although the 1991 standard will continue to be referenced for the first year to aid in the transition, the fact that both 1991 and 2002 editions will be superseded by 2014 should be welcomed across the industry.

According to technical consultant Vince Aherne, M.AIRAH, who is a member of the AS 1668.2 committee, there are three major changes in the new 2012 edition of which industry members should be made aware.

The first is that AS 1668.2-2012 essentially comprises a revision of the 2002 edition of the standard, but with the base ventilation rates taken from the 1991 edition.

Secondly, all references to environmental tobacco smoke – the target of protests by anti-smoking lobby groups when it was included in the 2002 edition – were removed from the standard. Indoor smoking is now not covered within the standard requirements.

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Finally, requirements for natural ventilation systems for buildings, including car parks, were relocated to a new standard, AS 1668.4-2012.

“Another significant change is the status of certain sections of the standard,” says Aherne. “For instance, the sections on kitchen hood exhaust design are now mandatory, as are the ventilation requirements for specific healthcare applications.”

In addition, many of the calculations required by the standard have been simplified or rationalised.

Aherne says the changes were made to ensure agreement of the ABCB and state and territory building and health regulators, and to allow the revised standard to be referenced in the NCC/BCA Volume 1 as a deemed-to-satisfy solution.

“It means that the 1991 and 2002 editions can be withdrawn, and the industry can revert to a single ventilation standard,” he says.

The removal of some excessive requirements found in the 1991 edition (compared to the 2002 version) will also be welcomed by the industry. These include the significantly higher ventilation required for car parks, and no concessions to the 6m separation rule between building intakes and exhausts.

“It is essential for the industry to believe in the standards that they are required to work with,” says Aherne. “When regulatory standards are so obviously out of date, there is always going to be compliance issues.”

Along with removing the duplication of the past, a number of other benefits are set to emerge from the adoption of the new 2012 edition of the standard.

For example, AS 1668.2-2002 and the many improvements it contained could only be accessed by industry through the alternative performance-based approach to building solution approval, as outlined in the NCC. However, once 1668.2-2012 is referenced



Vince Ahern, M.AIRAH

in NCC 2013, these solutions will be available for deemed-to-satisfy building compliance.

Ahern says this may lead to some cost savings, because the process of going through the alternative performance-based approach incurred additional documentation and verification steps, impacting costs.

Cost savings could also be realised through the significant reductions in ventilation rates in areas such as car parks, and areas that were previously included for environmental tobacco smoke.

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Many will have their own theories on why a resolution to the problems of AS 1668.2 has taken so long to come about. Yet there is little doubt that the move to ban indoor smoking across all states and territories in Australia has played a large part.

According to Ahern, as long as smoking indoors was legal and prevalent, ventilation designers and building owners felt the standard needed to include some ventilation requirements for this air contaminant.

“On the other hand, health interests felt that if that standard contained requirements for indoor smoking then these could be used as a (health) justification for continued indoor smoking,” he explains.

“Now that smoking is essentially banned in most Australian non-residential buildings, this unresolvable difference in perspectives has been removed.”

Another factor said to contribute to the delay was the global financial crisis, which combined with the new standards-writing processes recently adopted by Standards Australia, resulted in resource and funding difficulties for the revision project.

This is where AIRAH played an important role in resolving the matter.



Simon Hill, L.AIRAH, presenting AIRAH's seminars on AS 1668.2

Through its role as a leading advocate for the HVAC&R industry, AIRAH was instrumental in facilitating early discussions between Standards Australia and the Australian Building Codes Board to begin resolving the issues of the past. This included the publication of a discussion paper outlining a way forward.

AIRAH was then able to ensure Standards Australia allocated the internal management resources necessary to complete the project, itself contributing through the provision of official representation on the main and technical sub-committees.

AIRAH also partnered with Standards Australia to deliver a series of technical seminars about the changes to the new standards.

To ensure the changes are included in its training offering, AIRAH is updating the mechanical ventilation unit VU20097 of its Vocational Graduate Certificate in Mechanical Services (code application) qualification. This will be based on the AS1668.2-2012 edition as opposed to the 1991 version.

This unit is available to be taken as a single, individual stand-alone CPD unit, or as part of the full five-unit graduate certificate course.

Ahern says industry practitioners familiar with both the 1991 and 2002 editions should have no difficulty understanding and complying with the 2012 edition.

However, he says taking the VU20097 unit as a stand-alone CPD course would be a great way to become familiar with all the details and subtleties of the new requirements.

At the very least, industry practitioners would be well advised to obtain a copy of the 2012 edition and read it thoroughly, to ensure they are fully cognisant of the new requirements.

AS 1668.2-2012 is expected to be called up in the NCC/BCA Volume 1 in May. ▲

## MORE INFO

Until the end of March, Australian Standard 1668.2 is available at a discounted price in AIRAH's online store. To purchase, select the 'Online store' tab at [www.airah.org.au](http://www.airah.org.au)

Additionally, for more information on AIRAH's VU20097 CPD unit for AS 1668.2-2012, contact AIRAH's education assistant Effie Koudounis, at [effie@airah.org.au](mailto:effie@airah.org.au)