THE DEVELOPMENT OF STANDARDS

- Committees of volunteers representing various industry bodies & stakeholder roles
- Changes only made following advice and feedback from stakeholders
- Standards reflect industry consensus, to guide a practitioner’s ideas
- Some Standards are adopted by reference in legislation, codes or contracts (eg: AS 1668.1 & AS 1668.2)
- As stakeholders, your feedback is critical!
AS 1668.1 OBJECTIVES

In simple terms,
- to limit the spread of fire and smoke within buildings
- to prevent the initiation of fire within ductwork
- to react to the spread of smoke outside the smoke control zone of origin
- to keep smoke layer out of egress paths & above heads of escaping occupants

INTRODUCTION

This presentation has been prepared assuming the audience has practical experience in the application of AS/NZS 1668.1:2015

It is focused on proposed changes as part of the amendment project only

Participation in public comment is encouraged!

WHY AMEND IT ALREADY?

- Feedback received since the 2015 revision was published.
- Feedback has been generally positive regarding the changes made in the 2015 revision, but this new proposed amendment reflects requests from the industry for further clarifications.
- Timing wise, we expect the proposed amendment can be resolved in time for reference in NCC 2019.
- Like the recent amendment to AS 1668.2, this update to AS 1668.1 is classified as a “revised text amendment”. So while there are a number of refinements, there shouldn’t be any significant technical changes.
AMENDMENT STATUS

• The amendments aren’t set in stone yet.
• This is a proposed amendment and it is subject to the Public Comment process.
• The public comment period opened at midnight on Monday 17th July 2017 and will close at midnight Monday 18th September 2017.

SOME NOTABLE PROPOSALS …

ZONE PRESSURISATION

• Some misunderstandings in the application of Zone Pressurisation Systems (Section 8)
• We received clarification from ABCB that these systems were never intended to be applied horizontally between fire compartments
• If the BCA only requires this strategy between multi-storey (vertical) fire compartments, ABCB needs a PFC from industry to identify the need for clarifications
• Wording in the Standard needs to prevent any conflict with the BCA
ZONE PRESSURISATION

• I encourage further debate in the industry regarding potential benefits of horizontal applications, but this will need to be supported with needs and evidence that changes are necessary.
• Appendix A remains in AS 1668.1 as a guide to anyone trying to implement horizontal smoke control in the likes of health and aged-care buildings.
• Designers should also be aware that this smoke-control strategy relates only to fire compartments, not smoke compartments.

MINOR & MAJOR OPENINGS

• Terminology relating to “minor” and “major” systems has been improved
• Larger openings = increased risk in the spread of smoke when the combined area of openings between fire compartments
• These revisions in the 2015 edition were intended to establish a prescriptive limit for BCA requirements on openings that may “... unduly contribute to the spread of smoke ...”

SUBDUCTS

• Subduct terminology has progressed again, making it clearer that these should only be used to exempt the use of fire dampers in some exhaust systems and only where these include an opening into fire rated shafts or ducts.
• Air needs to continue to flow through subducts to prevent the back flow of smoke, so associated fans must continue to operate in a fire, and fire dampers cannot be installed in series with a subduct at any point through the system’s airpath.
• Use of a subduct at the most upstream point of a smoke exhaust system is unnecessary.
**DUCTWORK MATERIALS**

- Narrowed specification of ductwork materials and construction, to those requirements relevant to fire and smoke control.
- While other Standards may specify aspects such as thermal breaks and labelling, this is outside the scope of AS 1668.1 and is best handled by the relevant Standard.

**FIRE SERVICES COORDINATION**

- Other than some minor clarifications in Section 4’s diagrams, information relating to the protection of interfaces between the mechanical and fire-protection systems remains unchanged.
- It’s intended that this amendment will be published in conjunction with a similar update to AS 1670.1, while we work to eliminate any potential conflicts.
- I’m interested in the views of members regarding the potential reduction in content, to simply refer to AS 1670.1 for these requirements, which is actually the requirement of these clauses anyway.
- Would a reduction in duplicated text between the Standards actually make this clearer?

**BASELINE DATA**

- Commentary added to Clause 4.15, derived from the definition in the recently revised edition of AS 1851.
- This highlights the benefit of Baseline Data in enabling routine service and performance verification of systems specified in the Standard.
SHARING KITCHEN SHAFTS

- Limitations in the sharing of kitchen exhaust shafts should now be clearer in Section 6.
- For other kitchen exhaust
- For other ducts

IN FIRE MODE

- While an operating hood must not be shut down in fire mode, it’s accepted that an eventual loss of voltage will result in the system stopping anyway
- (unless the kitchen exhaust is designed to form part of the building’s smoke control system).

SHUTDOWN SYSTEMS

- Section 7 altered to reflect the intent that it applies to systems that are not required to run in fire mode.
- A Shutdown System in accordance with this Standard is in fact a very basic form of smoke control, with major openings automatically closed and fans stopping to prevent the spread of smoke through ventilation openings.
- Commentary is added in Section 5 to highlight that the shutdown override also applies to plant manually set to "ON".
STAIR PRESSURISATION: INTAKES

• Intake locations should prevent the simultaneous loss of both stairs
• Separate intake locations for separate stairs
• Some minor adjustments to the protection of electrical components associated with stair pressurisation systems

STAIR PRESSURISATION: DOORS

• “above/adjacent” was introduced in 1998 & was intended to apply to a single additional compartment. Proposed wording makes this clearer.
• Again, I encourage further debate among stakeholders regarding the suitability of this requirement in light of modern research and applications.
• But suitably supported feedback is necessary before this strategy can be overhauled in a future revision.

“NOTES”

• There are a number of instances where the word “NOTE:” was applied when formatting the final 2015 revision, not as intended by the sub-committee.
• These have been corrected to prevent any inadvertent non-compliances.
AS/ANZS-1668.1

- Standards Australia has advised us that from this amendment, the publication will no longer be a joint Australian/New Zealand Standard, simply AS 1668.1.
- Members working in New Zealand will need to keep an eye out on any applicable changes in NZ legislation.

SUMMARY

- Clarifications should again make these existing requirements easier to follow.
- I encourage members to review a copy of the draft (available from www.standards.org.au).
- If any of the proposed wording still seems unclear, comments should be submitted to Standards Australia during the Public Comment period, so the technical sub-committee has the necessary feedback with which to work.

Thank you