

SECTION 1 CONSULTATION QUESTIONS:

1.1 Do you agree with the nature of the problem?

NO:

Aspects presented in the "Consultation Regulation Impact Statement", referred here as the **ABCB RIS**, give some reasons in the Introduction, Background and Problem which are agreed, but contradictions in the ABCB RIS statements abound.

The nature of the problem pertaining to the inconsistency in the approach for performance solution is a real issue. The ABCB RIS document stated "Performance-based codes rely on three elements"... The isolation of those three items can't exist without 2 even more important elements:

1. A Regulatory System that enables the process of Performance Codes and
2. An Education and accreditation systems that produces competent people to interpret and implement those codes and standards and verification analyses.

The reason the country is in such a bad situation is the poor regulatory State framework and policing of those doing the work. A verification tool within the code – is not a satisfactory element on its own. As a Child Care industry, we expertly advised the NCC code based verification methods do not work or even apply to child based evacuation needs in buildings specifically early childhood centres.

Talking specifically in relation to Fire Engineering Performance Solutions, the following of the International Fire Engineering Guidelines (IFEG) or other internationally recognised approaches (SFPE) has been open to interpretation since its development in 1996 and adherence is not as strict as it should be.

1.2 Are there any other characteristics not described?

YES:

1. The competency of the persons reviewing the codes, standards, performance reports and those creating them. This includes all levels of Federal and State Governments, the ABCB itself and local government and the QBCC.
2. Education systems to train and verify professional competency and equal levels of services as they are registered for. This is not a national program and the "Mutual Recognition" approach has failed the system. This is not even mentioned in the ABC BRIS document.
3. People acting appropriately and practicing in their own area of competence. Not policed and little to no consequences.
4. Failure to collect reliable systems data, fire data, research data, insurance failures data. No investment, nor incentive to invest in the development of reliable data.
5. Australian Standards development and updates are not frequent (20-30 years apart). They are not produced using a non-bias experts' system like the NFPA, ASTM, ISO.

In NSW for example, the ability to refer documentation to C10 certifiers in the case of Fire Engineering is rarely adopted, possibly due to the fact of not passing the costs on to the client. Complete transparency can only be achieved by a thorough examination of the stakeholders in reviewing the information. Who are the correct stakeholders in these areas?

The ability to create performance solutions that are robust and stand the test of time for the life of the building must be based on quantitative data, not just qualitative agreements. But the lack of data collected is itself perpetuating the problem.

The more comprehensive the data the more interpretations and extrapolations can be made with confidence. The investment in the research that supports the process of performance solutions has a greater influence on the acceptance and continued relevance of solution. Something Australia has made no investment in for 25 years, and has not let this filter into the code and standards.

When performance solutions are in place, they may not be reviewed during the life of the building, even in the light of an obvious change of use. Performance solutions that may have been perfectly acceptable in the original use may be insufficient when the occupancy changes.

1.3 Are you aware of other circumstances when documentation is mandatory?

YES:

Under the current 2011 NSW Education and Care Services National Regulations, all early childhood education and care service providers are required to have policies and procedures for emergency and evacuation (97 & 168(2)(e)). reg168).

Yet, Authorised Officers of the NSW Department of Education regularly suggest higher regulatory requirements that which is included in the Building Code. These are inconsistently applied and are not founded on published/accepted information. Early childhood education and care services are too often intimidated by these Regulatory Officers to resist their suggestions, thereby implementing additional fire and emergency provisions without any demonstrable proof that they actually ensure or improve the safety for children and staff.

The Mining Act and Regulation requires the risk based assessment of construction and mine operations to be developed.

The Aviation Industry, where aircraft designs, operations and maintenance programs are fully developed to ensure safety and performance.

The Medical Industry, the development of drugs and theatre operating systems, are fully trial tested, developed and specified in detail for specific uses and compatibility to the human environment they will be applied.

Machines and Vehicles. The detailed engineering analysis and design of cars, buses, trucks, automatic lathes, robots and milling equipment that can pose a threat to life are tested and trailed and detailed in all forms of documentation to be manufactured to meet close tolerances and reproducible performance.

None of these industries need or use a VERIFICATION method to support them. They conform to STANDARDS, that evolve rapidly for sustainability. They use peer review, government review, and legal actions to keep those systems in a positive consumer use and application.

1.4 Are you aware of any residential buildings which required rectification as a consequence of the Performance Solution process followed?

YES:

The abuses of the verification methods, such as JV3 for energy efficiency have been inconsistently applied or have been undertaken by persons unqualified to conduct the work. The assessments are seen as a required paperwork by the builder and never make it onto the drawings and verification is left to the authority having jurisdiction or building certifier. Often, additional sarking and insulation repairs are needed to fix the mould and water ingress issues.

The application of CV1 and CV2 on the protection of external walls and the methods of passive fire protection. Very inconsistent in the quantitative methods. Some even apply a qualitative only approach, which is unacceptable.

The structural use of BV1.1 and BV1.2 is rarely applied on any project and the following of AS1170 for all loads has been missed on thousands of structural designs.

The assessment of light from adjoining spaces and rooms, is technically very difficult to apply and those who have did not undertaken the appropriate modelling to support their findings.

Ventilation reports for the relocation of Kitchen Exhaust vents, carpark discharges, are not applied to any true verification method, and modelling has been limited in use with expert judgement applied. Those cases need a standard of performance to be applied (AS1668.2), which the code

has limited guidance on, but could be improved with the inclusion of better research evidence. In some cases – added post treatment for noise and pollution was created.

The question has not asked for the DtS instances – as in more cases are observed there. It was not a Performance Solution that created issue – but the following of DtS measures.

1.5 Are you aware of commercial buildings which required rectification as a consequence of the Performance Solution process followed?

YES;

Again – in the answering of this question, there is no balanced question of DtS rectification required. Often – a Performance Solution is applied to overcome a failed DtS use or improve them.

Use of ESFR in sprinkler performance designs are often incorrectly applied. They are incorrectly specified.

The application of high-performance concretes in floors and tilt-up systems. They have no tested fire rating assessment and often fail early in their exposure to fire and fail.

Wall wetting WS deluge and window wetting sprinklers are incorrectly specified regularly and applied for the wrong approved tested approach.

In the DtS application – we observe the greatest number of failed applications, where up to 90% of all fire light weight wall systems are not to the standard or the manufactures requirements. These are just some of the vast number of DtS systems, (Not Performance) that exist and are never rectified.

SECTION 2 CONSULTATION QUESTIONS:

2.1 Do you have information on the extent of use of Performance Solutions in Class 1 and 10 buildings?

YES:

Our consultancy advisors are working in that industry, plus the conversion of Class 1 dwelling to Child Care.

Performance solutions for Class 1 buildings usually result of a non-compliance during the build process where a certifying authority has referred to a Fire Engineer for example. Performance solutions for these types of buildings generally speaking, do not form part of the design stage.

Fire walls and openings near boundaries are common, Fire Separating wall construction and DtS failure is common. Raised dwelling off the ground and the need to run the wall to ground is a common.

Class 10 used for farm use, rural fire vehicle storage, etc are commonly used.

2.2 •Do you have information on the extent of use of Performance Solutions in Class 2 to 9 buildings?

YES:

Our consultancy advisors are working in that industry and upgrades to Class 9 Child Care use.

A building of significant complexity typically involves performance solutions, we would argue that more buildings should be referred to performance based upon the complexity.

The certifying authority has the right to determine that the deemed to satisfy solutions do not meet the performance requirement 'to the degree necessary'.

Performance Designs are traditionally a "Fix up" for failed DtS designs and construction. They are rarely applied at the beginning of projects except for minor DtS variances not as a design technique to better design.

There are significant parts of Government Agencies, who do not allow performance designs. Some Insurers do not allow performance designs. They are discouraged by a very large sector of the Industry, developers, and Government agencies.

Given they offer genuine better outcomes, industry does not see the NCC as a Performance code.

2.3 Is stakeholder involvement in determining acceptance criteria likely to lead to higher confidence in Performance Solutions?

YES

If the stakeholder involvement is qualified and relevant, not all opinions are equal, and compliance does not begin and end with the Building Code. Acceptance criteria are technical measures and need technical abilities by those advising in order to set appropriate values.

As seen in previous consultations – the defining of suitable stakeholders is very important and their contributions.

We refer to public review comments by Hamish MacLennan to the NCC 2019 Amendment 1 Public Comment Draft for “Process for developing Performance Solutions”. He Stated:

“1. Stakeholders need to be thought through because at present, should they function as an expert panel ? If not then the recommendations of the building confidence report are not being taken into account. There is no accountability.”

Those with limited performance knowledge need to be subject to levels of accountability and access to the decisions for this Performance process, so that needs better definitions in our review.

2.4 • Do you agree with the estimates on the extent Performance Solutions are used in residential and commercial buildings?

NO;

Data details insufficient to make suitable review.

2.5 • Are you aware of any studies on the costs of rectifying building work as a result of inadequate Performance Solutions?

NO:

Data details insufficient to make suitable review.

We only see those from Insurance repairs and rectifications. The majority are DtS based failures, not Performance Solution based.

2.6 • Do you agree with the costs associated with rectification work outlined in Table 5?

NO:

Data details insufficient to make suitable review.

SECTION 3 CONSULTATION QUESTIONS:

3.1 Are there any other qualitative costs and benefits to consider under each option?

YES:

The robustness of the Fire Engineering process with the internationally recognised process that is adopted in multiple countries creates a transparent process as long as it is adhered to. Other disciplines subject to performance solutions should be required to follow a similar framework.

The cost of failures in the DtS construction of the past 25 years, has not equated the social costs. That includes failed business failing to rectify, Bankruptcies, failure to pay, suicides and losses in property value, increased insurances for the life of the industry.

These significant and real costs are not factored here and must be for a holistic approach to the issues for community risk and valuation.

The benefits of adding low cost at the front end of a project with improved documentation is well proven. The use of Architects and Engineers in supervision roles to assist the certifier, is a well proven benefit, with massive reductions in losses and rectification costs. They are the cheapest solutions and traditional – why we had a clerk of work 25 years ago.

3.2 Are there any other quantitative costs and benefits (e.g. reductions in insurance premiums) to consider under each option?

YES:

The building code is predominantly a document that sets forth the public's expectation of how a building should perform, specifically in terms of life safety. Performance solution, when done well, improve life safety by adding additional life safety features or consider specific building or occupant features.

The proper description of performance solution when measured against the deemed to satisfy provisions, like additional sprinklers, smoke exhaust can be recognised in insurance premiums or ongoing maintenance costs. The specific objectives of the client can, in a skilled practitioners' hands, be compatible with improved life safety.

Insurance industry has been left out in the discussion of these changes and they are in need of better risk evaluation to properties to reduce costs and losses overall.

3.3 Do you have any examples of costs associated with rectification work where a Performance Solution was developed inadequately?

NO;

We have seen many hundreds of failed Deemed to Satisfy applications of where rectification works had to be applied. In Queensland, where there is licencing of specific trades, the ability to administer the failed installations with fines and suspensions is limited and this is the current model framework that others are adopting.

3.4 Do you have any examples of costs associated with rectification work where a component of the Performance Solution process was not followed?

YES;

Application of a detection systems to support improved egress and responses in a residential property. The Builder altered those systems for a cheaper and DtS and lost the intended purpose of the system. The systems had to be retrofitted to the current system.

3.5 In absence of better information, do you agree with the cost of rectification estimates outlined in Table 9 relating to weatherproofing?

YES:

The additional statement that this could in fact be an underestimate is an accurate statement made in this section. In our experience, waterproofing is an incipient building defect that manifests many years later where the initial costs of rectification are insignificant. Replacements have included large sections of sprinkler and hydrant piping to replacing plant and other equipment due to an underlying weather tightness issue.

3.6 Do you agree that the benefits will outweigh the costs under each option?

YES:

In the context that the other 2 elements we outlined above are created in the same timeframes.

1. A Regulatory System that enables the process of Performance Codes and
2. An Education and accreditation systems that produces competent people to interpret and implement those codes and standards and verification analyses.

These are the necessary fuel to the NCC performance solutions. Without these applied, the ABC BRIS Options and their benefits will never be realised, they will run out of gas and we are back where this started. No Building Confidence.

SECTION 4 CONSULTATION QUESTIONS:

4.1 Do you believe that better building outcomes will be achieved by making changes to the Performance Solution process?

Limiting the use of performance solutions to disciplines that have adequately demonstrated the use of a transparent process that can be (peer) reviewed, backed by sound scientific principles and not opinion, will achieve better building outcomes.

4.2 Why?

The basics are already correct. The systems are not policed.

The performance based implementation by designers of the NCC code is not supported by most in the industry, and as such they don't agree with them, so they don't practice them. As stated above, many high-level developers like the State Governments, do not use them on principal.

The NCC is seen as a prescriptive code and processed like the US. Industry uses Performance Requirements to fix failed DfS designs and installation, like Cladding.

The NCC must have better performance definitions and apply Standards and Codes to achieve this, with higher standards of documentation. NCC 2019 has improved this.

The verification methods are a way to short cut proper design and those design methods are failing in the NZ and they will drop them.

Australia should not follow that failed model – so removing verification methods and most prescriptive events are needed to achieve these goals. We need to hit the RESET button on codes and standards.

SECTION 5 CONSULTATION QUESTIONS:

5.1 If proposed changes are adopted, should a 12 month transitional period be included prior to its implementation?

NO:

The details of the financial studies offered for the questions are not sufficient.

There is bias in the Deemed to Satisfy costs and rectification have been omitted, so we are concerned the way the questions are fashioned in this way. Balance is not more important than just numbers.

It will take at least 2 years and add the full research of the Warren Centre, new Australian Standards and University research on new building systems need to be collated and submitted in a new uniform PERFORMANCE BUILDING code, written from scratch.

ABCB is supported in this endeavour, but the Board needs to take stock of the fact industry advice is not being supported by ABCB staff and the most important case study for our Child Care industry, is that Amendment One introduced confusion, poorly reported results and a need to adopt a better code approach to well being of children in buildings.

Better late than never but the NCC is not there yet, and some mature discussions are needed to reach the goals outlined by the Shergold Weir Report and the ACBC RIS.