
# Consultation Papers

# Independent third-party reviews and mandatory inspections

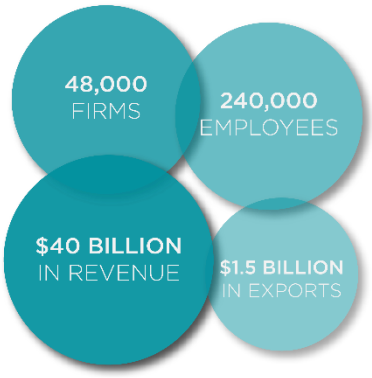
**SUBMISSION TO AUSTRALIAN BUILDING CODES BOARD**

**JULY 2020**

# Independent third party reviews and mandatory inspections

## Response to the ABCB's Consultation Papers

## ABOUT US




Consult Australia is the industry association representing consulting businesses in design, advisory and engineering. Our industry comprises some 48,000 businesses across Australia, ranging from sole practitioners through to some of Australia's top 500 companies, providing solutions for individual consumers through to major companies in the private sector and across all tiers of government. Our industry is a job creator for the Australian economy, directly employing 240,000 people. The services we provide unlock many more jobs across the construction industry and the broader community.

**Some of our member firms include:**

# Independent third party reviews and mandatory inspections

## Response to the ABCB's Consultation Papers

## INTRODUCTORY REMARKS

Consult Australia welcomes the opportunity to provide this response to the Australian Building Codes Board (ABCB) on independent third-party reviews and mandatory inspections. We understand this is one part of a broader suite of consultation ABCB is undertaking to support a national approach to implementing the recommendations of the *Building Confidence Report* by Shergold & Weir (BCR).[1]

At the outset, Consult Australia would like to stress how important certainty and consistency is to our members (and the broader building industry) as we strive to recover from the impacts of COVID-19. The work of the ABCB to find a nationally consistent approach, and then adoption by the states and territories (rather than development of conflicting schemes) is critical to ensuring that our members have a stable regulatory environment in which to operate.

It is important to acknowledge the hardening in the insurance market, particularly in relation to professional indemnity (PI) insurance that provides cover for the professional services provided by our members. This hardening has resulted in reduced capacity due to market consolidation, significantly increased premiums, and a reduction in policy coverage with carve-outs for risks associated with building work. Where the insurance policy does not provide cover, businesses and practitioners are exposed. While larger businesses can weather the changes better than smaller operators, the hardening of the insurance market affects all business. By way of example, we were contacted by one of our SME members gravely concerned about the affordability of their PI insurance. Their newly quoted premium for 2020/21 has gone from $30,000 for a $2million policy in the previous year, to over $100,000 for a $1million policy. This is not an isolated case.

The building and construction sector is now further impacted by COVID-19. The *Consult Australia COVID-19 Pulse Survey* (undertaken and published in early June 2020) indicates that two-thirds of our member businesses are experiencing a reduction in work from COVID-19. The building sector is a significant area of concern with 64% of businesses reporting a reduction. 56% of members anticipate that competition across the industry will become tighter over the next six months. This impact cannot be ignored when exploring reforms that can impact the market.

The ABCB's approach also needs to be informed by the current commercial realities including:

- The dominance of design and construct (D&C) contracts with contractors taking the lead on all aspects. Consultants are sub-contractors to the main contractor, meaning that the consultants delivering the professional design and advisory services are kept at arms-length from the principal client;
- The pressure to build faster and cheaper means that there is; no willingness to invest time up-front on design work before a building permit is granted; limited consultant access to sites; and a reluctance to pay consultants to re-draw designs to ensure they match the constructed building.

We appreciate that this consultation focusses on independent third-party reviews and mandatory inspections. These reviews and inspections should not replace investment of time and money in the work of the designers. We note, as we have in all submissions to all BCR-related consultations, a key risk is variation during construction that designers cannot access sites to see and therefore verify the build is compliant with the National Construction Code (NCC).

The case study of Opal Tower used by ABCB shows this, as the variation to design was approved via photographs rather than an on-site inspection. It is crucial that designers have enough site inspections during construction of their designs. This is more important than ever with various states and territories enacting laws requiring designers to declare designs, combined with the commercial realities that see risk and liability passed down the chain to designers.

1 www.industry.gov.au/sites/default/files/July%202018/document/pdf/building_ministers_forum_expert_assessment_-_building_confidence.pdf

The case study of Opal Tower also stressed that a junior design engineer conducted the sign-off. We take 'junior engineer' to mean someone with less than five years of post-graduate practical experience. The reform responses to the BCR report need to balance the need to have experienced engineers involved with the need to give junior engineers the opportunity to develop. Reforms that dissuade the use of junior engineers will have a disproportionate impact on small businesses who may only have one or two registered experienced engineers and then rely on a bigger team of junior engineers who will, for example undertake site inspections. These small businesses will not be able to work productively if only their senior engineers can be involved in inspections. Therefore, we suggest that the mandatory inspection regime involving the designer not stipulate the engineer's experience level – this should be determined by the consulting business based on the risk profile of the project.

In this submission we have provided comments on the practicality of the proposals and indicated where improvements could be made to assist in delivering the cultural and behavioural shift required to improve build quality.

## THIRD-PARTY REVIEW OF DESIGN WORK

Questions 7 – 16 relate to third-party review of design work.

In summary, Consult Australia's comments are:

- Question 7 – We agree that a risk-based approach is needed but suggest more work is needed on the model presented by ABCB to deliver greater certainty for industry.
- Question 8 – We suggest more work need to be done on the risk model but make some limited suggestions in respect of fire safety and structural design.
- Question 9 – We agree with the competency and criteria for independent third-party reviewers.
- Question 10 – We make some limited suggestions.
- Question 11 – We believe that building surveyors have a distinct role, irrespective of the risk level and that they must use an independent reviewer when the risk assessment justifies it.
- Question 12 – We think third-party reviewers should be selected from a government panel of third-party reviewers.
- Question 13 – We agree that the independent third-party reviewer should exercise judgement on the percentage of the design that must be reviewed. The reviewer can note the percentage and the reasons for deciding on that percentage in their report.
- Question 14 – We suggest that the reviewer issue a certificate of compliance, with supporting documented evidence of their process and findings, which will be recorded as part of the building approval documentation.
- Question 15 – We remain concerned about how the scheme will:
  - ensure the third-party reviewer has the appropriate skills and experience required; and
  - manage differences of opinion between designers and third-party reviewers on performance solutions.
- Question 16 – No further comments at this stage.

### Question 7 - Do you agree the risk-based model is the correct approach to identify the need for independent third-party reviews?

Consult Australia agrees on a risk-based approach to identifying the need for independent third-party reviews, but the model presented by ABCB fails to deliver enough certainty. We recommend more work be done to further develop the model.

The model presented in ABCB's Consultation Paper relies on 'building complexity' – a new definition proposed to be inserted in the National Construction Code (NCC). Prior to May 2020 our members raised concerns about the lack of certainty provided by the draft definition of 'building complexity'. It is noted that in May 2020 the ABCB announced that it did not endorse the proposed introduction of a 'building complexity' definition into the NCC and that further consultation is being undertaken on an Exposure Draft of the term, open until 1 November 2020.

The risk levels presented in ABCB's Consultation Paper has more detail than the early draft of the 'building complexity' definition. However, we believe that more consideration is needed to determine what a 'complex' or 'high risk' building is and the factors for consideration. There is too little differentiation in the complexities as they currently stand. More examples of typical buildings in each level are needed to better explain and define the different levels of complexity. ABCB should consider whether it is appropriate or not to have the same risk-model for design risks as for construction risks. Independent third-party reviews are a means to mitigate design risks rather than construction risks.

Considering the current risk-model, it seems that most buildings of any reasonable size will automatically fit in the 'risk level 3' or 'risk level 4' category. We submit that widespread use of independent third-party reviews of designs will not address the main risks relevant to building confidence and build quality. Most new buildings should not need additional independent third-party reviews of designs if there is more investment of each designer's time up-front combined with increased access to site to address variations during construction. If independent third-party reviews are required for a significant proportion of new builds, there will be a strain on the market as there will be a limited number of consultants available to do these reviews. Further, we do not want to create a 'tick box' code compliance review instead of genuine value add to the project. It should also be noted that risks relevant to designs can and are being addressed by other regulatory changes (such as the NSW approach where designers will need to declare designs which will be retained in a government e-planning portal).

Without more clarity on the risk model and criteria, inconsistent decisions will be made about which level of complexity a building is and there is a risk that some players will try to exploit the system to use the lowest level of complexity to reduce the extent of independent third-party reviews.

We suggest the ABCB compare these risk levels with the risk triggers and risk-based approach explored by the WA Government in its Consultation Regulatory Impact Statement (CRIS) on Reforms to the Approval Process for Commercial Buildings in Western Australia.

In our submission to the WA Government's CRIS we supported the risk-based approaches proposed and preferred WA's approach when compared to the ABCB's Exposure Draft of 'building complexity' because WA's framework provided more certainty.

The key concern we had with Proposal 25 of the WA Government's CRIS was ensuring that after the third-party review of high-risk design elements have been completed, no variations are made during construction that undermine that review. Consult Australia therefore submitted to the WA Government that Proposal 25 must go hand-in-hand with Proposal 24 which was establishing a set process for dealing with variations during construction. We also recommend to the WA Government that builders are educated on the high-risk design elements so that they can be certain that any and all variations during construction relevant to those elements are notified to the building surveyor (as per Proposal 24 of the WA CRIS).

### Question 8 – What elements of the design must be reviewed by an independent third-party reviewer?

Consult Australia members include professionals involved in all the design elements listed (structural, fire safety, accessibility, façade and energy efficiency). However, in the limited time available we were only able to get considered input from a fire safety and structural design perspective.

Fire safety:

- As discussed above, more work needs to be conducted on the risk model to determine whether greater on-site review by the lead fire safety design engineer involved in the design is enough.
- It is agreed that where a risk assessment justifies an independent third-party review, the fire safety design should be reviewed by an independent third-party reviewer.
- Where an independent third-party review is needed, the elements that need review include:
    - fire and life safety systems design; and
    - passive fire separation and penetrations (with a register or penetrations provided).

Structural:

- As discussed above, more work needs to be conducted on the risk model to determine whether greater on-site review by the lead structural engineer involved in the design is enough.
- It is agreed that where a risk assessment justifies an independent third-party review, the structural design should be reviewed by an independent third-party reviewer.
- Where an independent third-party review is needed, the elements that need review include:

- concept design for mid-range risk level (e.g. 'risk level 2' of ABCB's risk-model);
- 2+ constructability for mid-to-high risk level (e.g. 'risk level 3' of ABCB's risk-model);
- 3+ primary elements for high risk level (e.g. 'risk level 4' of ABCB's risk-model); and
- Full design for highest risk level (e.g. 'risk level 5' of ABCB's risk-model).

### Question 9 – Do you agree with the competency and criteria for independent third-party reviewer as outlined in the paper?

Yes.

### Question 10 – Who do you believe is competent to conduct the review? Choose all appropriate practitioners for the corresponding risk level

Please note that the question text is confusing – it reads as if it is about independent third-party reviews but then lists lead structural design engineer and lead fire safety design engineer 'who was involved in' the relevant design. That is contrary to definition of 'independent' discussed above.

As stated above, Consult Australia advocates for designer's involvement on-site to ensure construction occurs according to the design in all builds not matter the risk profile. We believe on-site inspections can be conducted by junior engineers with the consulting business determining when a senior engineer needs to review sign-off on variations etc. We see this as separate to independent third-party reviews which should only be carried out when the risk assessment justifies it. We also see review by a building survey as separate to independent third-party reviews.

Consult Australia members include professionals involved in most of the roles listed. However, in the limited time available we only received considered feedback from those involve in fire safety design and structural design:

- As discussed above, more work needs to be conducted on the risk model to determine whether greater on-site review by the lead design engineer involved in the design is enough.
- We agree that the building surveyor has a role in ensuring construction is meeting the design, and with the designer has an important role to deal with variations during construction.
- Where a risk assessment justifies an independent third-party review, the reviewer must:
  - not be a building surveyor;
  - not be the lead designer involved in the design;
  - meet any relevant registration requirements (also met by the lead designer);
  - be accredited in the same design category as the lead designer; and
  - have the same level of competency as an accredited and registered designer.
- The proof engineer should be reserved for buildings with the highest level of risk.

Please note the recommendations of the Warren Centre in respect of fire safety.

### Question 11 - Do you agree that the building surveyor can review the design if the building surveyor is component or should the building surveyor use an independent reviewer on all occasions?

As stated above, Consult Australia considers the role of building surveyor as being separate from the independent third-party reviewer. Building surveyors have responsibilities relevant to all buildings irrespective of risk level. At all times the building surveyor should ensure that the design team is sufficiently involved to ensure construction as per the designs.

Where a risk assessment justifies the involvement of independent third-party review, the building surveyors must use independent reviewers with the particular competencies required (see answer to Question 10 above).

### Question 12 – How do you think third-party reviewer(s) should be sourced (e.g. building surveyor identifies an independent structural engineer to verify the design or does government set up a panel to choose from)?

Consult Australia supports the establishment of a government panel of independent third-party reviewers that building surveyors must choose from. There should also be a requirement that building surveyors seek to rotate reviewers so that the same reviewers are not used for all work. As stated above, the experience of the reviewer is key to the success of the use of independent third-party reviewers.

### Question 13 – What percentage of the building design must be reviewed as part of independent third-party review?

We agree that the independent third-party reviewer should exercise judgement on the percentage of the design that must be reviewed. The reviewer can note the percentage and the reasons for deciding on that percentage in their compliance report.

### Question 14 – What do you think is the most appropriate level of documentation/record keeping required to ensure compliance, transparency and future reference of these reviews?

Consult Australia suggests that the reviewer issue a certificate of compliance, with supporting documented evidence of their process and finding, which will be recorded as part of the building approval documentation.

### Question 15 – Does the proposed approach address all the issues related to independent third-party reviews?

The only outstanding concerns we have are:

- How will the scheme ensure the third-party reviewer has the appropriate skills and experience required? and
- How will differences of opinion between designers and independent third-party reviewers on matters of design compliance with the performance requirements of the NCC be managed? Consult Australia does not support an approach that is non-collaborative and results in the designer changing the design simply to ensure the independent third-party reviewer is satisfied. The designer and reviewer should work together to resolve issues.

### Question 16 – any other comments

N/A

## MANDATORY INSPECTIONS

Questions 17-26 relate to mandatory inspections.

In summary, Consult Australia's comments are:

- Question 17 – We agree that a risk-based approach is needed but suggest more work is needed on the model presented by ABCB to deliver greater certainty for industry.
- Question 18 – We support increased on-site access by designers to ensure construction meets the design, and additional mandatory inspections where the risk assessment justifies it.
- Question 19 – We are of the view that the original designer should undertake all mandatory inspections with the building surveyor (and with the Proof Engineer for buildings with the higher risk ratings). Additional inspections should be undertaken by the original designer as well as an independent inspector.
- Question 20 – We suggest that the building surveyors and designers jointly decide on the percentage of building construction that needs to be inspected based on the risk factor relevant to each project. The proportion of inspections should be increased where initial inspections raise compliance concerns.
- Question 21 – We agree that multiple inspections for elements might be required. This should be jointly decided on by the building surveyor and the designer/engineer based on the complexity of the design and the knowledge/experience of the builder working from the design.
- Question 22 – The design engineer is best placed to determine the inspection points as they have the most knowledge and understanding of the design complexity and the NCC-compliance aspects.
- Question 23 – We do not believe all the parts of the fire safety systems have been identified. There needs to be a comprehensive list.
- Question 24 – We agree with the Consultation Paper that once mandatory inspections have been conducted and the construction is deemed compliant, a certificate of compliance/inspection report is issued and recorded as part of the required building approval documentation.
- Question 25 – The only outstanding concern we have is how will builders be incentivised to increase on-site inspections by designers/engineers and resolve issues identified during inspections?
- Question 26 – No further comments at this stage.

### Question 17 – Do you agree the risk-based model is the correct approach to identify the types of mandatory inspections for a building?

Consult Australia agrees on a risk-based approach to identifying the need for mandatory inspections, but the model presented by ABCB fails to deliver enough certainty. We recommend more work be done to further develop the model.

The model presented in ABCB's Consultation Paper relies on 'building complexity' – a new definition proposed to be inserted in the National Construction Code (NCC). Prior to May 2020 our members raised concerns about the lack of certainty provided by the draft definition of 'building complexity'. It is noted that in May 2020 the ABCB announced that it did not endorse the proposed introduction of a 'building complexity' definition into the NCC and that further consultation is being undertaken on an Exposure Draft of the term, open until 1 November 2020.

The risk levels presented in ABCB's Consultation Paper has more detail than the early draft of the 'building complexity' definition. However, we believe that more consideration is needed to determine what a 'complex' or 'high risk' building is and the factors for consideration. There is too little differentiation in the complexities as they currently stand. More examples of typical buildings in each level are needed to better explain and define the different levels of complexity. ABCB should consider whether it is appropriate or not to have the same risk-model for design risks as for construction risks. Mandatory inspections are primarily a way to mitigate construction risks.

Looking at the current risk model, most buildings of any reasonable size will automatically fit in the 'risk level 3' or 'risk level 4' category. This may be reasonable considering the poor construction standards that have been reported. However, designers should not be the ones holding builders to account for quality construction. We support increased access to site by designers to address variations during construction. However, the mandatory inspection regime cannot be the only way to address the construction risks in building projects.

Without more clarity on the risk model and criteria, inconsistent decisions will be made about which level of complexity a building is and there is a risk that some players will try to exploit the system to use the lowest level of complexity to reduce the extent of mandatory inspections.

We suggest the ABCB compare these risk levels with the risk triggers and risk-based approach explored by the WA Government in its Consultation Regulatory Impact Statement (CRIS) on Reforms to the Approval Process for Commercial Buildings in Western Australia.

In our submission to the WA Government's CRIS we supported the risk-based approaches proposed and preferred WA's approach when compared to the ABCB's Exposure Draft of 'building complexity' because WA's framework provided more certainty.

### Question 18 – Do you agree on the list of mandatory inspections for each risk level? Are there any elements of the building construction that must be inspected for the different risk levels that should be included as part of the minimum types of inspections (refer to diagram)?

As stated above, Consult Australia supports designers having enough on-site access to ensure construction meets the design. The list of mandatory inspections provides a level of certainty and consistency to inspections, but every building is different therefore building surveyors and designers should jointly decide if different inspections are needed in the circumstances.

Our membership employs professionals involved in most of the elements listed, but in the limited time we could not get a broad range of feedback on all elements. Our feedback concentrates on fire safety and structural design elements.

Fire safety:

- Fire safety engineers should be involved in conducting inspections, at least once before the certificate of occupancy is issued, to ensure that all the elements/fire safety measures of the fire safety strategy have been included in the completed building, including any changes as a result of design variations.
- Fire system designers need to check individual fire systems for compliance with the relevant AS or other standard called up by the NCC.
- Fire safety engineers need to be onsite for critical witnessing of fire systems commissioning to ensure that the systems work effectively together in line with the cause-consequence matrix put together for the project. They need to undertake these on-site inspection roles so that state/territory requirements for declarations of compliance can be met.

Structural:

- Structural design engineers should be involved in conducting inspections throughout construction.
- Structural design engineers should review steelwork as well as reinforcement drawings so that inspections can go beyond checking bar sizes and spacing to the intersections between members where energy from seismic events is dissipated.

### Question 19 – Who do you believe is competent to conduct the inspections?

ABCB's Consultation Paper indicates that the building surveyor engaged to perform the statutory building approval function should be responsible for conducting mandatory inspections and only call for other practitioners to inspect where they lack the skills or competency.

Consult Australia notes, as it has in all its submissions to all BCR-related consultations, a key risk is variation during construction that designers cannot access on-site to see and therefore verify to be NCC-compliant. The case study of Opal Tower (see page 3 of ABCB's Consultation Paper) also pointed to the fact that the variation to design was approved via photographs rather than an on-site inspection. Therefore, we believe it is crucial to ensure that the designer be involved in all site inspections involving the construction of the designs. This is more important than ever with various states and territories enacting laws that place significant responsibility on designers for declaring designs and the commercial realities that see risk and liability passed down the chain to designers.

In respect of fire safety, only accredited and registered fire safety engineers and fire systems designers are competent to undertake the fire safety related roles.

### Question 20 – What percentage of the building construction do you think should be inspected?

We suggest that the building surveyors and designers jointly decide on the percentage of building construction that needs to be inspected based on the risk factor relevant to each project. The proportion of inspections should be increased where initial inspections raise compliance concerns.

The combined knowledge of the designer and the building surveyor should ensure that an understanding of risk is considered, and the level of inspections isn't just minimal or based on past experience.

The proportion of the building construction that needs inspecting will likely depend on the circumstances including the number of levels in the building and the number of builders involved in the construction of the relevant element and their likely knowledge of NCC-compliance. However, with legislative requirements on designers to make declarations about the construction meeting the design, 100% of the building construction will need inspections to ensure designers can manage their liability exposure.

### Question 21 – Do you think there are elements where there needs to be multiple inspections for the same element?

Yes – but this needs to be determined in consultation with the designer/engineer based on the complexity of the design and the knowledge/experience of the builder working from the design.

### Question 22 – Who do you think is best places to determine the inspection points (timing of inspections) and number of inspections?

The design engineer is best placed to determine the inspection points as they have the most knowledge and understanding of the design complexity and the NCC-compliance aspects. The timing will also need to be sufficient to allow the designer to sign off that the 'as built' condition meets the requirements of their design.

### Question 23 – Do you think all the parts of the fire safety systems have been identified for minimum mandatory inspections?

We do not believe all the parts of the fire safety systems have been identified. There needs to be a comprehensive list – not just some reference to wet systems, or a few others. The list needs to be sufficient to allow the designer to sign off on the 'as built' condition requirements of their design.

### Question 24 – What do you think is the most appropriate level of documentation/record keeping required to ensure compliance, transparency and future reference to these inspections?

We agree with the Consultation Paper that once mandatory inspections have been conducted and the construction is deemed compliant, a certificate of compliance/inspection report is issued and recorded as part of the required building approval documentation.

### Question 25 – Does the proposed approach address all the issues related to mandatory inspections?

The only outstanding concern we have is how will builders be incentivised to increase on-site inspections by designers/engineers and resolve issued identified during inspections? Increasingly builders see the value of an inspection regime to identify defects early to avoid delays in handover and rectification costs. However, this awareness needs to dominate to help mitigate the commercial pressures currently in play.

Question 26 – any other comments?

N/A

# CONTACT

We would welcome the opportunity to further discuss the issues raised in this submission. To do so, please contact:

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