



<b>GENERAL</b>	<b>BUILDING SAFETY</b>
<b>0.4.1 Guide on A2.2(4) of the BCA and referral to the TFS</b>	

**NOTE: THIS GUIDELINE HAS BEEN PUBLISHED FOR INFORMATION AS A WORKING DRAFT FOR INFORMATION. THE TFS ARE CURRENTLY IN CONSULTATION WITH THE AUSTRALIAN INSTITUTE OF BUILDING SURVEYORS (AIBS) TASMANIAN CHAPTER ON THE CONTENT AND FORMAT OF THE GUIDE. THIS MAY RESULT IN CHANGES TO THE GUIDELINE IN THE FUTURE.**

## 1. PURPOSE

This guide summarises the Tasmania Fire Service (TFS) position on clause A2.2(4) of the Building Code of Australia (BCA) and the referral of performance solutions under the *Building Act 2016*. It also provides guidance on the following:

- Extent of consultation recommended to be undertaken with TFS on performance solutions;
- Documentation which may be required for varying levels of project complexity;
- The minimum information to include in a performance-based design brief (PBDB);
- Handbooks that provide information on preparation of performance solutions;
- Timeframes for PBDB reviews and a process for verifying acceptance of a PBDB.

This guide is intended to be utilised by building surveyors and fire safety engineers who prepare fire safety performance solutions or refer PBDBs to the TFS. This guideline does not cover all aspects of the referral process or the role of the TFS as a reporting authority under the *Building Act 2016* and *Building Regulations 2016*.

The use of information in this guide does not guarantee that a performance solution will be deemed to be operationally suitable as part of a referral. The TFS will comment on performance solutions on a case-by-case basis.

## 2. TFS POSITION ON A2.2(4) AND REFERRAL OF PERFORMANCE SOLUTIONS

The position of the TFS on clause A2.2(4) of the BCA is summarised as follows:

- A PBDB should be undertaken for every project with a fire safety performance solution;
- The TFS are a relevant stakeholder in the fire engineering process;
- A PBDB should be issued to TFS if referral to Chief Officer is required by *Building Act 2016*;
- The PBDB should have in-principle support<sup>1</sup> from the TFS prior to preparing a fire engineering performance solution report and submission of a Form 41 under section 26A and 27 of the *Building Regulations 2016* for a Chief Officers Report (COR);
- Major changes to a FER or new performance solutions warrant a new PBDB and Form 41;

<sup>1</sup> In-principle support is endorsement of a general idea or plan for a fire safety strategy, despite the details not yet being established.

- The TFS will aim to provide a response within 14 days to a PBDB, subject to:
  - The information in section 7 being provided, as required;
  - Stakeholder availability for meetings / phone calls;
  - The timely provision of request for clarifications / additional documentation to TFS.

If a PBDB is not submitted, compliance with the *Building Act 2016* and the BCA suite may not be achieved. Where a PBDB is not undertaken, the Form 47 for a project is likely to include commentary on whether an incomplete PBDB process has impacted our capability to undertake a comprehensive review of operational suitability.

Changes may occur which warrant a revision to the Certificate of Likely Compliance (CLC) after a Form 47 is issued by the Chief Officer. This includes new fire safety performance solutions, alternative fire safety strategies for a building or modifications to fire safety systems that comply with the deemed-to-satisfy (DTS) provisions of the BCA.

It is the position of the TFS that any new fire safety performance solutions or major changes to existing performance solutions that have previously been referred to the TFS as part of a PBDB or a Form 41 should be re-referred. TFS considers that a PBDB should be undertaken to review such changes and any new performance solutions.

TFS consider that a final report should include:

- Any additional performance solutions or addendums identified for a project;
- Correspondence from other building disciplines that form part of the fire safety strategy;
- The relevant information included in the handbooks in section 8.

The flowchart in Figure 1 in section 5 provides an example of the described referral process.

### 3. SUMMARY OF CHANGE TO THE BCA

Part A2 of the BCA explains methods for demonstrating compliance with the performance requirements and includes the steps needed to show compliance. Clause A2.2(4) of the BCA was introduced on 1 July 2021 and prescribes a process for the preparation of fire safety performance solutions. The clause is replicated in full in Appendix 1. In brief, the following is required to be undertaken:

- A PBDB to be prepared for a performance solution;
- Consultation with relevant stakeholders;
- Carrying out analysis in accordance with the assessment methods in clause A2.2(2);
- Evaluation of results against agreed acceptance criteria; and
- Final reporting with minimum levels of detail.

A PBDB process is defined in schedule 3 of the BCA as “...*the process and the associated report that defines the scope of work for the performance-based analysis, the technical basis for analysis, and the criteria for acceptance of any relevant performance solution as agreed by stakeholders.*” No definition of a final report is provided, however as a minimum the following is deemed to be required to be documented:

- All performance requirements and relevant deemed-to-satisfy (DTS) provisions;
- Identification of all of the assessment methods;
- A summary of the PBDB process and information identified during stakeholder review;
- Confirmation that the performance requirements are achieved;
- Details of conditions and limitations, if they exist.

#### 4. REFERRAL OF THE PBDB AND THE BUILDING ACT 2016

Under the Tasmanian *Building Act 2016*, the TFS are a reporting authority on operational suitability for deemed-to-satisfy (DTS) provisions and performance solutions which relate to schedule 1 fire safety requirements. [Building Act 2016 Tas]

To receive a report from the Chief Officer, the building surveyor submits a Form 41 with the relevant documentation for review. The Chief Officer then has 14 days to review the application and respond with a Form 47 – i.e. a COR.

In TFS experience, the Form 41 is issued when a certificate of likely compliance (CLC) is being sought by a client. In terms of design process, this would typically indicate that detailed design, to a reasonable extent, has been completed and the building is ready to be constructed. Where a fire safety performance solution is prepared, the submission to the Chief Officer typically would include the fire engineering report for review.

Under clause A2.2(4) of the BCA suite, a brief must be prepared, and agreement sought by all relevant stakeholders on the technical justifications, acceptance criteria and scope of the analysis. The TFS are a relevant stakeholder in the fire engineering process and our position is that a PBDB should be submitted to / agreed by the TFS prior to a Form 41 request for report.

When a COR is issued by the TFS, a reference is made to the FER provided with the Form 41. The FER may be updated to include new performance solutions or variations to the design after the COR has been issued to the building surveyor. Some changes may be minor in nature – e.g. typographical errors, modifications to the fire safety strategy – while others may be more complex. Major changes may include:

- Additional fire safety engineering performance solutions;
- Major updates / changes to the existing performance solutions which alter the analysis;
- Variations to firefighting equipment which is relied on in a performance solution.

The TFS do not consider minor changes to warrant a re-referral under the Building Act 2016. Major changes should be subject to an updated PBDB process, an updated fire safety engineering report and a new Form 41. Any new submissions would be provided with an updated COR and subject to the statutory 14-day referral time frame.

If there is any ambiguity on whether a change warrants re-referral to the TFS, it is recommended that the building surveyor and / or fire safety engineer contact the Building Safety Unit to discuss the proposed changes and seek input on whether they would benefit from an updated referral.

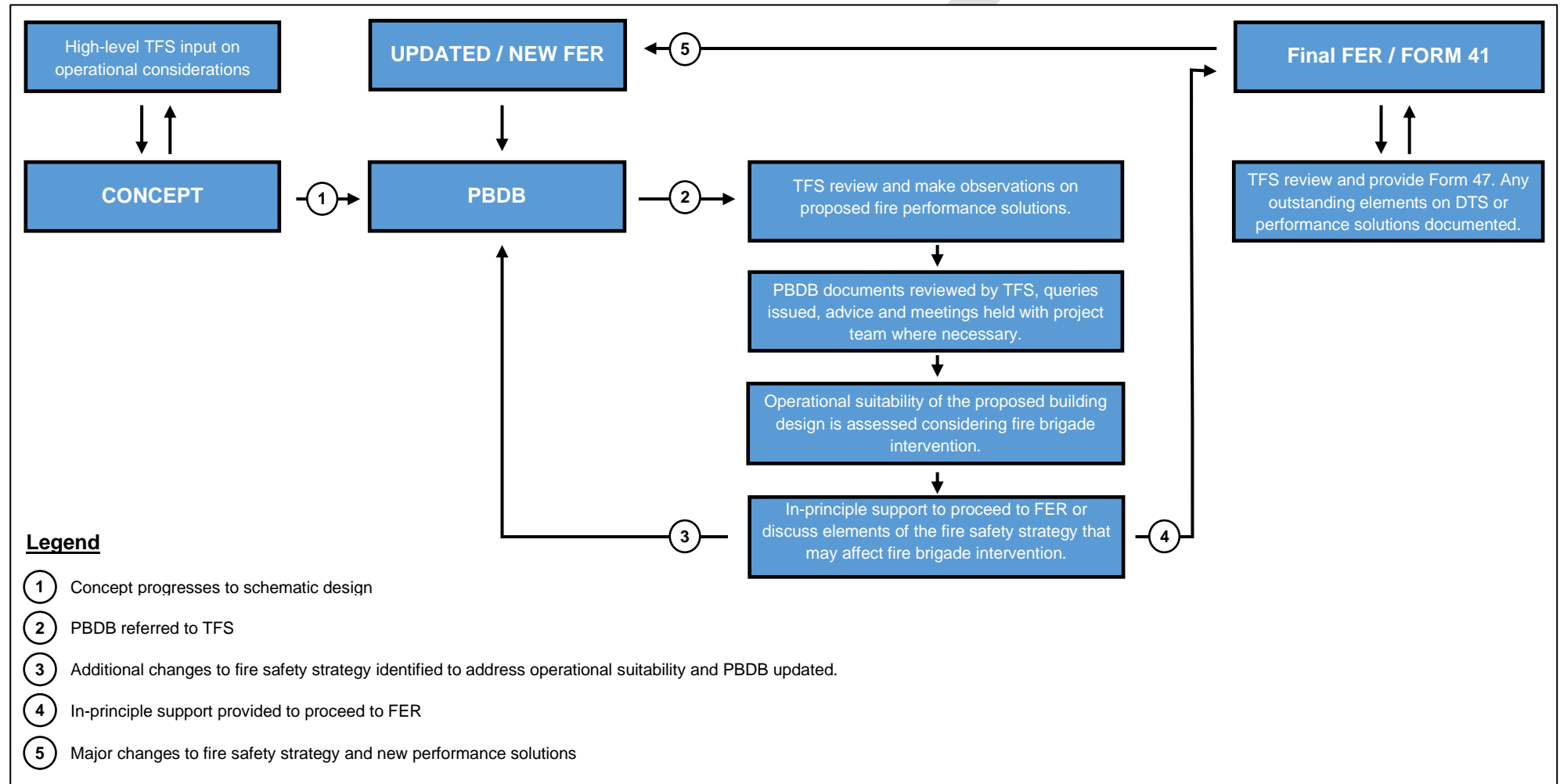
It is the opinion of the TFS that the building surveyor should verify compliance with part A of the BCA suite is achieved for every project. This includes the requirement to prepare and undertake a PBDB with the relevant stakeholders. Where a PBDB process is not undertaken for performance solutions that require referral under the *Building Act 2016* it is likely that the Form 47 will state that:

- Note that a PBDB process was not undertaken; and
- If this has affected our ability to verify if a performance solution is operationally suitable.

The flowchart in Figure 1 in section 5 provides an example of the described referral process.

## 5. FLOW CHART ILLUSTRATING EXAMPLE OF REFERRAL PROCESS TO THE TFS

The flow chart in Figure 1 provides an example of the process for referring PBDBs and updates to FERs to the TFS.



**Figure 1** Flowchart illustrating clause A2.2(4) and referral to the TFS

## 6. EXTENT OF CONSULTATION WITH TFS AT DIFFERENT DESIGN STAGES

Clause A2.2(4) of the BCA requires a PBDB to be prepared and consultation to be undertaken for every performance solution. However, the extent of consultation required on each project, and each stage of a project, is not explicitly outlined. The process for developing a performance solution and the level of stakeholder involvement will vary depending on the complexity of the project. As stated in the ABCB Handbook on the Performance Solution Process [ABCBa]:

*“Complexity may relate to a whole project or a specific solution. Value and size alone are not reliable indicators of complexity. Instead complexity can be thought of as a higher potential for interaction between competing design elements.*

*Thus, relatively simple projects may require a complex performance solution and a relatively complex project may be addressed with a simple performance solution. Context for each performance solution is therefore important and will need to be clearly communicated during the process and ultimately reflected within the final performance solution report.”*

The complexity of a performance solutions may be influenced by some of the following variables:

- The number of performance solutions;
- Unique design elements – e.g. cladding, green walls, lightwells, etc;
- Level of interaction between design consultants;
- Any special fire safety hazards present in the building – e.g. distilleries;
- The impact of a performance solution on fire brigade intervention.

The complexity is likely to drive the extent of consultation. For example, a simple performance solution – e.g. a minor office travel distance – may be discussed over the phone and closed out via an email. More complex arrangements may require multiple meetings, a report and email correspondence prior to reaching agreement on a PBDB. For example, a high rise building with multiple performance solutions, a bespoke fire brigade intervention strategy and unique design elements is unlikely to be suited to a simple PBDB process.

The TFS consider that a PBDB must be undertaken on every project that requires referral to the Chief Officer under the Building Act 2016. The extent of PBDB should be commensurate to the project complexity. The complexity and required consultation process should be discussed early in the design process and agreed to with the relevant stakeholders. The TFS recommend that they be involved in the early in the design process to define what a reasonable consultation process is and discuss competing design requirements / objectives.

The TFS also encourage stakeholder engagement at the concept stage, as this allows us to:

- Provide preliminary input on the operational suitability of fire safety systems;
- Flag major operational challenges for a given building;
- Identify unique fire hazards which may impact on fire brigade intervention.

Where changes to a fire safety strategy occur after a PBDB is undertaken, the TFS may need to update their advice to the project team. We strongly encourage engaging with us on major changes as soon as possible to mitigate the risk of project delays or when formal reports are requested via a Form 41.

It is noted that TFS are not system designers and are unable to verify or validate the suitability of fire safety systems or the extent of compliance that is achieved with relevant building codes, standards and regulations. This is the responsibility of project team, design practitioners and the building surveyor.

## 7. MINIMUM LEVELS OF INFORMATION TO INCLUDE IN THE PBDB

To ensure TFS responses can be provided in a timely manner, minimum levels of information are necessary to assist in the evaluation of a performance solution. It is recommended that the items identified in Table 1 be considered in every PBDB.

**Note:** This is consistent with the recommendations included in the guides identified in section 8.

Item	Information
1.	Key stakeholders – e.g. owner, architect, building surveyor, design specialist, etc.
2.	Brief description of building work.
3.	Description of building – e.g. rise in storeys, construction type, floor area, exits, etc.
4.	Location of key fire-fighting equipment – e.g. brigade entry point, FDCIE, booster, etc.
5.	Itemised list of specific DTS non-compliances and performance requirements.
6.	Description of the performance solutions.
7.	Acceptance criteria for each individual performance solution.
8.	If applicable, summary of reference building/s used in a comparative analysis <b>Note:</b> Refer to section 6.6 of FSVM Handbook [ABCBB] for more information.
9.	If necessary, brief overview of proposed justifications for analysis.
10.	Key inputs for modelling – e.g. tool, inputs, tenability criteria, model validation, etc.
11.	Summary of FBIM analysis, where proposed.
12.	Sensitivity, redundancy or uncertainty analyses proposed.
13.	Any limitations or assumptions, where they exist.
14.	Construction, commissioning, management, use and maintenance requirements.
15.	Supporting evidence – e.g. test reports, preliminary calculations, etc.

**Table 1 Recommended information to include in PBDB**

It is acknowledged that the extent of documentation for each performance solution may differ depending on the project complexity and scope. We recommend that TFS are engaged during the early stages of the design to discuss suitable levels of documentation for our review.

## 8. HANDBOOKS AND GUIDES FOR DOCUMENTING PERFORMANCE SOLUTIONS

Several handbooks and guidance documents are available that detail the process for preparing performance solutions, undertaking consultation with stakeholders and documenting FERs. TFS endorse the following guidance documents and handbooks for the purposes of complying with clause A2.2(4) of the BCA suite:

- Australian Building Codes Board (ABCB) short form guidance document:  
<https://www.abcb.gov.au/resource/infographic/performance-solution-process>
- The ABCB handbook on the Performance Solution Process:  
<https://www.abcb.gov.au/resource/handbook/handbook-performance-solution-process>

- The ABCB handbook on the Fire Safety Verification Method:  
<https://www.abcb.gov.au/resources/category/handbook>
- The process documented in the International Fire Engineering Guidelines:  
<https://www.abcb.gov.au/resource/guideline/guidelines-international-fire-engineering-2005>

## 9. TIMEFRAMES AND IN-PRINCIPLE SUPPORT FROM TFS

Although there is no formal trigger for a PBDB under the Building Act 2016 or timeframes for a response, we will endeavour to maintain consistency with our reporting obligations for Form 41s – i.e. 14 days. This timeframe will be subject to:

- The minimum required information being provided in section 7;
- Stakeholder availability for meetings / phone calls;
- The timely provision of request for clarifications / additional documentation to TFS.

To formalise acceptance of a PBDB process, once any concerns are resolved TFS will aim to respond to any PBDB submission with in-principle support for the proposed performance solution from an operational perspective in writing. Any extra commentary to be considered by the project team will also be conveyed in writing.

Approved by:



Andrew McGuinness  
**MANAGER, BUILDING SAFETY UNIT**

(For and on behalf of the Chief Officer)

## Appendix 1 – Clause A2.2(4) of the BCABCA

Clause A2.2(4) of the NCC states the following:

- (4) Where a performance requirement is proposed to be satisfied by a performance solution, the following steps must be undertaken:
  - (a) Prepare a performance-based design brief in consultation with relevant stakeholders;
  - (b) Carry out analysis, using one or more of the assessment methods listed in (2), as proposed by the performance-based design brief;
  - (c) Evaluate results from (b) against the acceptance criteria in the performance-based design brief;
  - (d) Prepare a final report that includes –
    - (i) all performance requirements and/or deemed-to-satisfy provisions identified through A2.2(3) or A2.4(3) as applicable; and
    - (ii) identification of all assessment methods used; and
    - (iii) details of steps (a) to (c); and
    - (iv) confirmation that the performance requirement has been met; and
    - (v) details of conditions or limitations, if any exist, regarding the performance solution.



## Appendix 2 – References

Australian Building Codes Board (ABCBA), Handbook: Performance Solution Process, Canberra, 2021, <https://www.abcb.gov.au/resource/handbook/handbook-performance-solution-process>

Australian Building Codes Board (ABCBB), Handbook: Fire Safety Verification Method, Canberra, 2020, <https://www.abcb.gov.au/resources/filter/guidance-material>

Building Act 2016 (Tas)

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