# Guidelines for inspection of class 2 to 9 buildings

Guideline under the Building Act 1975

29 March 2023



# Contents

	De		
	ose of these guidelines		
	al status of these guidelines		
Back	ground	3	
	k-based approach to inspection of class 2 to 9 buildings		
	ing started		
	Intended use and classification of a building	4	
	Detailed documentation including specifications	4	
Insp	ections	5	
	Notices for inspection		
	A builder must give notice for inspection	5	
	Consequences of a builder not giving notice for inspection	6	
	Inspections without notice	6	
2.	What and when to inspect	6	
	Aspects	7	
	Stages	7	
	Other inspections – additional certifying functions	8	
	Increasing frequency of inspections	9	
	Who inspects or assesses work onsite		
	The building certifier for the assessable building work		
	Another building certifier	10	
	Competent persons		
	QBCC licensees		
	Results of inspections		
	Work complies		
	Work does not comply		
	Documentation		
	Inspection documentation - definition		
	Documentation required onsite		
	Documentation requested by the owner		
	Documentation where an engagement is discontinued		
	Documentation where a BDA lapses		
	Record keeping		
Mon	aging the process		
Iviali	Effective communication		
	Managing changes during construction		
	Changes to design or construction of a building		
	Changes to practitioners		
	Changes to owners		
Appe	endix 1 – Developing an inspection schedule		
	Risk matrix: a tool for establishing a sufficient inspection schedule for class 2 to 9 buildings		
Арре	Appendix 2 - Case studies		
-	Case study 1		
	Case study 2	33	

# Scope

The scope of this guideline is limited to the inspection of class 2 to 9 buildings as defined in the Building Code of Australia (BCA).

# Purpose of this guideline

The purpose of this guideline is to provide guidance to builders and inspecting persons (e.g. building certifiers and competent persons) about how to meet their responsibilities for inspections under the *Building Act 1975* (BA) and the Building Regulation 2021 (BR). This guideline sets out the legislative provisions applicable to inspection of assessable building work for class 2 to 9 buildings.

This guideline does not cover inspections undertaken outside the scope of the BA or BR such as those covered in the *Electrical Safety Act 2002* or the *Workplace Health and Safety Act 2011*.

This guideline aims to improve professional building standards by helping practitioners undertake inspections in accordance with industry best practice, promote safe community outcomes through improved levels of statutory compliance and encouraging accountability among building industry practitioners.

Carrying out inspections in accordance with best industry practice means following all the procedures and protocols in this guideline including, but not limited to:

- who can inspect work
- applying a risk-based approach when identifying what and when to inspect
- assessing the competency of other practitioners
- · certifying compliant work, including how and when to give certificates
- · addressing non-compliant work, including how and when to give notices
- accepting certificates and notices from others
- retaining documents and records.

# Legal status of this guideline

This guideline is made under section 258 of the BA. The chief executive may make guidelines to help achieve compliance with the BA, which includes guidelines about inspecting building work.

Section 47 of the BR provides that a person inspecting and certifying aspects of assessable building work is taken to have complied with this part if the person inspects and certifies the work under the guidelines made by the chief executive.

Under section 133A of the BA, in performing a function under the BA, including a building certifying function, a building certifier must have regard to any guidelines made under section 258 that are relevant to performing the function. Evidence that a building certifier has had regard to those guidelines in performing a function may assist the building certifier in dealing with a complaint about their performance of the function.

# Background

A building certifier is responsible for managing the building approval process with all relevant practitioners. This important role ensures that all the aspects of the building work comply with the building assessment provisions of the BA. For class 2 to 9 buildings, building certifiers are required to undertake sufficient inspections of buildings at the stages stated in the building development approval (BDA). In practice, this means that a building certifier should take a holistic approach to assessing a building rather than just considering a single aspect, such as structural adequacy.

Section 44 of the BR prescribes the stages of assessable building work that require inspections. For single detached class 1a buildings and class 10 buildings and structures, the stages are more prescriptive and a separate guideline is available to assist building certifiers to undertake those inspections.

Other than single detached class 1a buildings and class 10 buildings and structures, section 44(1)(a) of the BR prescribes that the stages of assessable work that must be inspected are the stages stated in the BDA (e.g. the inspection schedule for the assessable building work).

This guideline aims to assist building certifiers to undertake inspections for class 2 to 9 buildings (which include multi-storey residential buildings, office buildings, shops, public halls, and commercial and industrial buildings).

# A risk-based approach to inspection of class 2 to 9 buildings

This guideline aims to provide practical and effective inspection methods for building certifiers to meet their statutory duties and obligations. It applies a risk-based approach to the inspection of class 2 to 9 buildings, including a risk matrix, with examples of suggested application to particular buildings.

The size, complexity, and nature of some class 2 to 9 buildings means it is not practical for a building certifier to inspect every element of the building for compliance with the BDA. For this reason building certifiers can, in certain circumstances rely on competent persons to provide evidence of compliance for certain aspects or stages of assessable building work.

Building certifiers are responsible for determining and implementing an inspection schedule (e.g. what should be inspected and when) for the various aspects of building work for the BDA.

An inspection schedule that relies on prescriptive, itemised checklists may not sufficiently address the varying complexities that exist between class 2 to 9 buildings. This could lead to instances where low-risk buildings are over-inspected (significantly adding to costs and delays) and high-risk buildings are under-inspected (increasing the health and safety risk).

An inspection schedule for class 2 to 9 buildings should directly address the risk of the building. A riskbased approach allows building certifiers to take an overall view of the safety requirements of a building and establish an inspection schedule.

# Getting started

### Intended use and classification of a building

The use of a building will ultimately determine how it is to be classified under the BCA. Building classification involves a process of understanding risks according to its use. Clearly understanding the intended use of a building is critical to applying an appropriate classification. Correctly classifying the building will ensure relevant provisions of the BCA are applied. It will also assist the scheduling of inspections, ensuring compliance both during and at the end of the build.

The delineation of these risks is the first step for a building certifier to consider when determining the inspection schedule and allocation of resources. This will assist in ensuring compliance with the BCA and approval documents.

### Detailed documentation including specifications

A building certifier should require that satisfactory levels of detailed documentation are provided so the necessary building code compliance assessment can be properly carried out. The ability to refer to detailed documentation provides a vital reference tool and assists in ensuring that inspections of key building elements are conducted and not inadvertently overlooked.

For further guidance on design documentation, refer to the document titled <u>Design acceptance, Model</u> <u>guidance on BCR recommendations 13-16</u> published by the Australian Building Codes Board (ABCB).

The effectiveness of an inspection is enhanced by the clarity of information in the approval documents. With complex matters involving things such as fire safety installations, there may be a need to complement details

on plans with relevant specifications. The plans may provide a location of a particular component while its installation and function are better understood through supporting information.

A building certifier should require all necessary information to be readily available to assist in formulating an inspection schedule. Readily available information will also reduce unnecessary interruptions to the process. For example, the location of smoke exhaust intakes can be easily identified on general plans. The construction and integration of the required ductwork may necessitate far more detailed specifications for such things as fire dampers, support mechanisms and system monitoring. Consideration of such matters in the assessment of an application is necessary to enhance the effectiveness and timing of on-site inspections.

Even though simple matters such as ceiling heights may only require indicative representation in documentation, they may have an impact on the timing of inspections and other associated elements.

The importance of detailed documentation should not be underestimated in the context of inspecting building work. The role of a building certifier was explored in the legal case of *Toomey v Scolaro's Concrete Constructions Pty Ltd* [2001] (Toomey's case). This case is discussed later in this guideline and makes it clear the responsible building certifier needs to carefully check the details of the plan against the applicable standards and codes. Any ambiguity in the plans should be resolved and errors corrected before proceeding with construction of the work.

Care needs to be taken to adequately identify where a performance solution is proposed. Particular aspects of the proposal may warrant a specific inspection. This is especially important for unusual or unique proposals because the relevant practitioners may have limited experience in undertaking the work. For example, a performance solution may have several important facets such as the expected airflow from smoke extraction fans. During construction, a contractor may decide to purchase a different model of fan which may affect the operation of the fire safety installation during a fire. Only an inspection would identify this crucial change.

For further guidance on BCA performance solutions, refer to the document titled *Performance Solution Process* published by the ABCB and the ABCB website which contains a suite of resources including PowerPoint presentations and training modules through NCC Tutor. To access these resources, click on the Education tab at <u>www.ncc.abcb.gov.au</u>.

# Inspections

# 1. Notices for inspection

### A builder must give notice for inspection

The person who is in charge of carrying out building work<sup>1</sup> (a builder<sup>2</sup>) **must** ensure the building certifier is given a notice (a notice for inspection).

Examples of a builder:

- · a person who contracts with an owner to perform building work for the owner
- a person who holds an owner-builder permit under the *Queensland Building and Construction Commission Act 1991* (QBCC Act) for building work and who, under the QBCC Act, engages subcontractors to perform all or part of the work.

A notice for inspection<sup>3</sup> advises the building certifier that the building work has been carried out to the completion of a stage when inspection, and in some cases testing, must be carried out. This notice may be given in writing or orally<sup>4</sup> as agreed between the builder and the building certifier. For example, the notice may be a telephone call, email or by other electronic communication. As part of adopting good business

<sup>&</sup>lt;sup>1</sup> Section 5 of the BA

<sup>&</sup>lt;sup>2</sup> Schedule 10 of the BR

<sup>&</sup>lt;sup>3</sup> Section 48 of the BR

<sup>&</sup>lt;sup>4</sup> Section 48(3) of the BR

practices, it is expected the builder will keep a record of giving the notice for inspection to the building certifier.

In the case where the building certifier is a local government building certifier, the builder may give notice to the building certifier by giving it in writing to the local government.

A <u>Form 58 – Notice for inspection for a stage of building work</u> may be used by the builder to meet their obligation under section 48 of the BR to give notice for inspections at the completion of each stage of the building work.

Once notified by the builder, the relevant certifier must ensure the stage of work is inspected at the time agreed with the builder.

The builder must not start the next stage of work until they have been given a certificate of inspection for the current stage stating that it complies with the BDA i.e. a *Form 16 – Inspection certificate*.

### Consequences of a builder not giving notice for inspection

If a builder fails to give a building certifier notice for inspection of a stage of work, the building certifier, once aware of the fact, **must** notify the Queensland Building and Construction Commission (QBCC)<sup>5</sup>. The QBCC then has a discretion to investigate and take enforcement action where appropriate.

### Inspections without notice

A building certifier or competent person can inspect any aspect of another stage of the work, regardless of whether a builder has given a notice of inspection for the stage.

# 2. What and when to inspect

On-site construction is a translation of the detail in plans and specifications to the physical fabric and elements of a building. The more detail available to a builder, the easier it is to provide a finished product that will comply with the approval documents and the applicable building codes. While this may be self-evident, it will only be effectively achieved if sufficient inspections are conducted to ensure compliance.

Building certifiers are responsible for ensuring specific compliance with the relevant standards, codes and legislation is achieved. Visual inspections, carried out by the building certifier or a competent person on their behalf, are the most effective way of confirming that the details of the documentation are reflected in the actual on-site construction. However, building certifiers are not responsible for the quality of the finish or specific workmanship within the construction process. This is the contractual obligation of the builder to the client.

It is essential at the early stage of construction that the building certifier ensures the building is located on the site, in accordance with the BDA. For example, before the building work substantially commences, the building certifier should require evidence confirming all the components of the building will comply with the BDA conditions.

Toomey's case (referred to above) indicated that building certifiers must oversee building code compliance and instigate some reasonable and reliable checking process. As class 2 to 9 buildings contain a large range of safety features specified by various parts of the building code, this is an important practice to adopt.

The building certifier can go onto the building site at any time to perform their building certification functions and to carry out compliance inspections to certify the assessable building work<sup>6</sup>. The building certifier or their competent person for the work can inspect any aspect of a stage of work<sup>7</sup> whether or not the builder has notified the building certifier that the particular stated stage of work is complete and ready for inspection.

<sup>&</sup>lt;sup>5</sup> Section 50 of the BR

<sup>&</sup>lt;sup>6</sup> Section 10 of the BA

<sup>&</sup>lt;sup>7</sup> Section 62 of the BR

Random checking by a building certifier (or the competent person giving inspection help on their behalf) should form part of a reasonable inspection schedule. For example, a building may require systems of smoke detection, sprinkler protection, fire collars, fire hydrants and various other fire safety installations. A reasonable level of inspections may involve random checking of some matters of compliance for each system on a number of levels of the building.

Examples of how such an audit might be achieved include but are not limited to:

- fire-rated penetrations
- sound-rated construction for duct work
- concealed space detection as part of a fire safety installation.

### Aspects

An **aspect** of building work is a **component of a stage**<sup>8</sup>. Various aspects make up each stage of assessable building work. For example, for the final stage of a class 2 building, aspects may include waterproofing, emergency lighting and shower screen glazing (amongst others). There are no prescribed aspects of building work.

To meet the statutory obligation to carry out inspections in accordance with best industry practice, inspections of any of the aspects should be physically undertaken on the construction site.

A person inspecting and certifying aspects of assessable building work is taken to have complied with Part 8 of the BR if they inspect and certify the work under this guideline<sup>9</sup>.

### Stages

A stage of assessable building work is the stage at which the work **must be inspected**<sup>10</sup>. Stages of assessable building work are prescribed in section 44 of the BR.

The building certifier should take a holistic view of the assessable building work for the class of building under the building development application being assessed.

The building certifier must nominate stages of work that require inspection in the BDA. Any stages nominated in an approval are prescribed stages under section 44(1)(a) of the BR and must be inspected. For example, a certifier may choose to nominate:

- waterproofing
- stormwater
- energy efficiency provisions
- separating walls.

The inspection of a stage of work must include all relevant aspects for each stated stage of the building work. A building certifier inspecting and certifying stages of assessable building work must have regard to this guideline<sup>11</sup>.

When a relevant building certifier receives a notice for inspection for a stage of building work from the builder<sup>12</sup> stating the stage is complete and ready for inspection, the building certifier must ensure the stage is inspected by an inspecting person.

- <sup>9</sup> Section 47 of the BR
- <sup>10</sup> Schedule 2 of the BA

<sup>&</sup>lt;sup>8</sup> Schedule 10 of the BR

<sup>&</sup>lt;sup>11</sup> Section 133A of the BA

<sup>&</sup>lt;sup>12</sup> Section 48 of the BR

The relevant certifier must ensure the stage is inspected by the inspecting person at a time agreed by the builder and certifier<sup>13</sup>. The inspecting person must not unreasonably refuse to inspect a **stage** of the assessable building work at the agreed<sup>14</sup> time.

#### Class 2 to 9 buildings - prescribed stage under section 44 of the BR

For class 2 to 9 buildings, the prescribed stage/s is all stages at which the BDA states the work must be inspected.

**Note:** If preliminary work such as partial demolition is required, the BDA could state that this is an inspection stage.

### Other inspections – additional certifying functions

The building owner, where they are not the client, may request that the building certifier carry out additional inspections by giving the client an additional certification notice within 10 business days of being given the *Form 18 - Notice to the owner (where owner is not the client) that a private certifier has been engaged*. The client must then give the notice to the certifier within five business days of receiving it<sup>15</sup>.

The certifier must perform the additional certifying function requested in the notice and in the time agreed between the parties or as determined by the certifier and provide copies of the documentation relevant to that function to both the client and the owner within five days of performing that function.

The owner is liable for the reasonable costs for the performance of the additional certifier function under the notice<sup>16.</sup>

The table below illustrates the steps that must be followed by the owner (where they are not the client), client and certifier to facilitate the request for an additional certification.

Owner	The owner must give an additional certification notice to the client <b>within 10 business day</b> receiving a <i>Form 18 - Notice to the owner (where owner is not the client) that a private cert</i> <u>has been engaged</u> .	
Client	The client must give a copy of the additional certification notice to the building certifier <b>within five business days</b> after receiving the notice. The owner may withdraw this notice prior to a decision on the agreed day or way to determine the agreed day.	
Client Building certifier Owner Builder (if not client)	Within 10 business days of the certifier receiving an additional certification notice, the building certifier, owner, client and builder (if not the client) must decide on the agreed day or an agreement to determine the agreed day to perform the additional function/s. Otherwise, the certifier must nominate a day, or a way to determine the agreed day, within 15 business days after receiving an additional certification notice and notify the owner and client.	
Building certifier	The building certifier must perform the certifying function stated in the additional certification notice on or before the agreed day.	
Building certifier	The building certifier must give the owner and client, within five business days, after performing the certifying function, copies of all documents relevant to the function.	

<sup>13</sup> Section 51 of the BR

<sup>14</sup> Section 51 of the BR

15 Section 143B of the BA

<sup>16</sup> Section 143B(10) of the BA

<u>Building Form 31 – Additional certification notice</u> may be used by the owner and the client to meet the requirements of section 143B of the BA for an owner to request the performance of an additional certifying function.

#### Agreed day

The agreed day is defined<sup>17</sup> as the day agreed to, or worked out under an agreement between the client (i.e. person who engaged the certifier), the building certifier, the owner of the building (if not the client) and the builder (if not the client). Otherwise, the day nominated by the building certifier<sup>18</sup>.

If the agreed day or an agreement to determine the agreed day is not decided within 10 business days after the day (relevant day) the client gives a copy of the additional certification notice to the building certifier. The building certifier must then nominate the agreed day or the way to determine the agreed day, within 15 days from the relevant day. The building certifier must tell the client and the owner what they have decided.

For instance, if the agreed day or an agreement to determine the agreed day is not reached, then the building certifier must either nominate a day, or a way to determine the agreed day and then inform the client and owner. For example, the building certifier may nominate that the way to determine the agreed day is within two days of the date when the client (e.g. builder, architect, design professional) contacts the building certifier and notifies them the building work subject of the additional certifying notice is ready to be inspected.

# Increasing frequency of inspections

When noncompliance is detected in a stated inspection, the building certifier should consider increasing the frequency and detail of inspections. This will ensure overall compliance with the BDA is achieved. Reinspection of those identified noncompliant elements of the construction should be undertaken. It is not appropriate for all compliance matters to be confirmed only by installer certificates.

# 3. Who inspects or assesses work onsite

### The building certifier for the assessable building work

The building certifier for the assessable building work is the certifier who approved the building development application for the work. When a building certifier undertakes inspections, they are an 'inspecting person'<sup>19</sup>.

A building certifier can undertake inspections in accordance with the level of certifier licence held by the individual.

A building certifier – level 1 may undertake inspections for all classes of buildings and structures<sup>20</sup>.

#### A building certifier - level 2 may only:

- without the supervision of a building certifier level 1: undertake inspections for buildings and structures having a rise of no more than three storeys and a total floor area no more than 2,000m<sup>2</sup> or
- under the supervision of a building certifier level 1: help in inspecting all classes of buildings and structures<sup>21</sup>.

A **building certifier – level 3** may only undertake inspections for class 1 buildings or class 10 buildings or structures<sup>22</sup>.

<sup>&</sup>lt;sup>17</sup> Section 143B(11) of the BA

<sup>&</sup>lt;sup>18</sup> Section 143B(8) of the BA

<sup>&</sup>lt;sup>19</sup> Section 51 of the BR

<sup>&</sup>lt;sup>20</sup> Section 152 of the BA

<sup>&</sup>lt;sup>21</sup> Section 153 of the BA

<sup>&</sup>lt;sup>22</sup> Section 154 of the BA

When undertaking inspections, building certifiers must:

- act in the public interest
- avoid any conflicts of interest
- comply with the code of conduct.

A building certifier can work for a local government or be a private certifier.

#### Cadet building certifiers

A cadet building certifier is a person who has been appointed by a supervising certifier and who:

- has been employed for at least three months by a local government or private certifier assisting and under direct supervision of a building certifier (with the three months completed within the last six months)
- is undertaking an accredited course of study<sup>23</sup>.

A supervising certifier should ensure that a cadet building certifier has the necessary ability, experience, qualifications and skills to assist to undertake inspections<sup>24</sup>.

Cadets can only undertake inspections that are permitted under the level of licence held by the supervising certifier, and the supervising certifier is ultimately responsible for the inspection<sup>25</sup>.

# Another building certifier

Another building certifier is a building certifier who is **not** the building certifier for the assessable work (i.e. not the certifier who approved the building development application). Another building certifier can undertake aspect or stage inspections on behalf of the building certifier for the assessable work. Another building certifier can act as a 'competent person (inspection)' or as an 'inspecting person', depending upon the function they are performing.

#### Aspects

Another building certifier undertaking **aspect** inspections:

- must be deemed a competent person by the building certifier for the assessable work prior to undertaking the inspection of the aspect
- is termed a 'competent person (inspection)'
- inspects the work to check the **aspect** is complete and compliant with the BDA
- can give an aspect inspection certificate (*Form 12 Aspect inspection certificate (Appointed competent person)*).

Another building certifier acting as a competent person may accept and rely on an aspect inspection certificate from another competent person without inspecting the work. This is subject to various conditions including the requirement that the other competent person has the relevant competency and is permitted to give a certificate. The certificate must be relevant to the competency and building work.<sup>26</sup>

Both persons must be deemed a competent person by the building certifier for the assessable work **prior** to undertaking the inspection.

#### Restrictions

The BR restricts who a building certifier can deem as a competent person for some aspects for single detached class 1a buildings. These restrictions do not apply to other classes of buildings. For further information about competent persons, refer to the *Competent persons* section of this guideline and the *Guideline for competent persons*.

<sup>&</sup>lt;sup>23</sup> Section 41 of the BR

<sup>&</sup>lt;sup>24</sup> Section 42 of the BR

<sup>&</sup>lt;sup>25</sup> Section 42 of the BR

<sup>&</sup>lt;sup>26</sup> Section 76 of the BR

#### Stages

Another building certifier undertaking stage inspections:

- · inspects the work to check all aspects are complete and compliant with the BDA
- does not need to be deemed a competent person by the building certifier for the assessable work
- is termed an 'inspecting person'
- can give a stage inspection certificate (Form 16 Inspection certificate).

Another building certifier may accept and rely on an aspect inspection certificate for an aspect of the stage of the assessable building work without inspecting the stage<sup>27</sup>.

# Competent persons

A competent person for inspections is a person who the building certifier decides is competent to give the certifier inspection help, termed 'competent person (inspection)<sup>28</sup>. A competent person (inspection) can undertake aspect or stage inspections on behalf of the building certifier for the assessable work.

A competent person assisting the building certifier for the assessable work can act as a 'competent person (inspection)' or 'inspecting person' depending upon the function they are performing.

A building certifier may choose to assess an individual<sup>29</sup> as competent to give inspection help for a stage of work, or aspect work for a stage, where the work may be either:

- highly technical or is of such complexity that the building certifier needs inspection help from another building practitioner who has expertise the building certifier does not have
- in a remote area where due to excessive travel distances it may be impracticable for the building certifier to inspect work personally.

In assessing the person<sup>30</sup>, the building certifier must:

- have regard to the individual's experience, qualifications, and skills for the matter
- ensure that the person is registered or licensed if a law requires the person to be registered or licensed to be able to give the help
- comply with the guidelines for the assessment of competent persons made by the chief executive.

The building certifier must assess and decide an individual is a competent person for inspection help **before** they can, as a competent person, give inspection help<sup>31</sup> i.e. the building certifier must assess and decide that the individual is competent **prior** to them carrying out the inspection.

A building certifier may decide that a cadet building certifier is a competent person<sup>32</sup>, unless the building certifier is either:

- the cadet building certifier's supervising certifier
- · the cadet building certifier's employer
- employed by the same employer as the cadet building certifier.

#### Aspects

A competent person undertaking **aspect** inspections:

- · inspects the work to check the aspect is complete and compliant with the BDA
- must be deemed a competent person by the building certifier for the assessable work **prior** to undertaking the inspection
- is termed a 'competent person (inspection)'
- can give an aspect inspection certificate (*Form 12 Aspect inspection certificate (Appointed competent person)*).

<sup>&</sup>lt;sup>27</sup> Section 52 of the BR

<sup>&</sup>lt;sup>28</sup> Section 33 of the BR

<sup>&</sup>lt;sup>29</sup> Acts Interpretation Act 1954 defines an individual as a natural person.

<sup>&</sup>lt;sup>30</sup> Section 34 of the BR

<sup>&</sup>lt;sup>31</sup> Section 33 of the BR

<sup>&</sup>lt;sup>32</sup> Section 43 of the BR

A competent person may accept and rely on an aspect inspection certificate from another competent person without inspecting the work. This is subject to various conditions including the requirement that the other competent person has the relevant competency and is permitted the give a certificate. The certificate must be relevant to the competency and building work.<sup>33</sup>

Both persons must be deemed a competent person by the building certifier for the assessable work **prior** to undertaking the inspection.

#### Restrictions

The BR restricts who a building certifier can deem as a competent person for some aspects for single detached class 1a buildings. These restrictions do not apply to other classes of buildings.

#### **Stages**

A competent person undertaking stage inspections:

- · inspects the work to check all aspects are complete and compliant with the BDA
- must be deemed a competent person by the building certifier for the assessable work prior to undertaking the inspection
- is termed an 'inspecting person'
- can give a stage inspection certificate (Form 16 Inspection certificate).

A competent person may accept and rely on an aspect inspection certificate from another competent person for an aspect of the stage of the assessable building work without inspecting the stage<sup>34</sup>.

#### Restrictions

The BR restricts a competent person (inspection) from undertaking some stage inspections for single detached class 1a buildings or a class 10 buildings or structures. These restrictions do not apply to other classes of building.

However, for all building classes, a competent cannot undertake an inspection for a **stage** of building work if they are the builder for the work or carried out building work for any aspect of the stage<sup>35</sup>.

**Note:** Nothing prevents a competent person from providing inspection help for **aspect** work of the prescribed stages of work<sup>36</sup>.

For further information about competent persons, refer to the Guideline for competent persons.

### **QBCC** licensees

For class 2 to 9 buildings, a QBCC licensee can be deemed a competent person by a building certifier to undertake aspect and stage inspections, subject to any applicable restrictions.

Note: When a licensee is undertaking stage inspections as a competent person, they are referred to as an 'inspecting person'.

#### Aspects

A QBCC licensee undertaking aspect inspections:

- inspects the work to check the aspect is complete and compliant with the BDA
- must be deemed a competent person by the building certifier for the assessable work prior to undertaking the inspection
- is termed a 'competent person (inspection)'
- can give an aspect inspection certificate (<u>Form 12 Aspect inspection certificate (Appointed competent</u> person)).

<sup>&</sup>lt;sup>33</sup> Section 76 of the BR

<sup>&</sup>lt;sup>34</sup> Section 52 of the BR

<sup>&</sup>lt;sup>35</sup> Section 39 of the BR

<sup>&</sup>lt;sup>36</sup> Section 46(3) of the BR

A QBCC licensee who a certifier decides is a competent person may accept and rely on an aspect inspection certificate from another competent person without inspecting the work, subject to the provisions of section 76 of the BR. Both persons must be deemed a competent person by the building certifier for the assessable building work **prior** to undertaking the inspection.

#### Restrictions

The BR restricts who a building certifier can deem as a competent person for some aspects for single detached class 1a buildings. These restrictions do not apply to other classes of buildings.

For further information about competent persons, refer to the *Competent persons* section of this guideline and the *Guideline for competent persons*.

#### **Stages**

A QBCC licensee undertaking stage inspections:

- inspects the work to check all aspects are complete and compliant with the BDA
- must be deemed a competent person by the building certifier for the assessable work prior to undertaking the inspection
- is termed an 'inspecting person'
- can give a stage inspection certificate (<u>Form 16 Inspection certificate</u>).

A QBCC licensee who a certifier decides is a competent person may accept and rely on an aspect inspection certificate from another competent person for an aspect of the stage of the assessable building work without inspecting the stage<sup>37</sup>.

#### Restrictions

The BR restricts a QBCC licensee acting as a competent person (inspection) from undertaking some stage inspections for single detached class 1a buildings or class 10 buildings or structures. These restrictions do not apply to other classes of building.

However, for all building classes, a QBCC licensee who a certifier has decided is a competent person cannot undertake an inspection for a stage of building work if they are the builder for the work or carried out building work for any aspect of the stage.

**Note:** Nothing prevents a competent person from providing inspection help for **aspect** work of the prescribed stages of work<sup>38</sup>.

For further information about competent persons, refer to the *Competent persons* section of this guideline and the *Guideline for competent persons*.

# 4. Results of inspections

### Work complies

#### Aspects

#### Aspect inspection certificate

A competent person (inspection) for an **aspect** of building work may give the building certifier an aspect inspection certificate if the competent person:

- has carried out an inspection in accordance with best industry practice
- is satisfied that the aspect of the stage has been completed and complies with the BDA<sup>39</sup>.

<sup>&</sup>lt;sup>37</sup> Section 52 of the BR

<sup>&</sup>lt;sup>38</sup> Section 46(3) of the BR

<sup>&</sup>lt;sup>39</sup> Section 74 of the BR

The approved form for an aspect inspection certificate is <u>Form 12 - Aspect inspection certificate</u> (Appointed competent person).

The aspect inspection certificate must state both:

- the basis for giving the certificate
- any tests, specifications, rules, standards, codes of practice or publications relied on<sup>40</sup>.

All certificate fields must be substantially completed.

A competent person may accept and rely on an aspect inspection certificate from another competent person, subject to the provisions of section 76 of the BR. Both persons must be deemed a competent person by the building certifier for the assessable work prior to undertaking the inspection.

A competent person must personally sign the aspect inspection certificate. An electronic signature may be used in accordance with the *Electronic Transactions (Queensland) Act 2001.* 

**Note:** A competent person (inspection) must not give the building certifier a document containing information the person knows, or reasonably suspects, is false or misleading in a material particular<sup>41</sup>.

#### Restrictions

The BR restricts the type of competent persons (inspection) who can give an aspect inspection certificate for some aspects of single detached class 1a buildings. These restrictions do not apply to other classes of buildings.

#### Stages

#### Stage inspection certificate

An inspecting person for a **stage** of building work must give the builder a stage inspection certificate if the inspecting person:

- · has carried out an inspection in accordance with best industry practice
- is satisfied all relevant aspects of the stage have been completed and comply with the BDA for the work<sup>42</sup>.

Note: An inspecting person is either the building certifier for the assessable building work, another building certifier or a competent person (inspection).

The approved form for a stage inspection certificate is Form 16 - Inspection certificate.

The stage inspection certificate must state both:

- the reasons all relevant aspects of the stage are complete and compliant with the BDA
- any tests, specifications, rules, standards, codes of practice or publications relied on<sup>43</sup>.

All certificate fields must be completed in full, including date of inspection.

The inspecting person may accept and rely on an aspect inspection certificate from a competent person for an aspect of the stage of the assessable building work.

The inspecting person must personally sign the stage inspection certificate. An electronic signature may be used in accordance with the *Electronic Transactions (Queensland) Act 2001*.

**Note:** If the inspecting person is a competent person (inspection), the competent person must not give the building certifier a document containing information the person knows, or reasonably suspects, is false or misleading in a material particular<sup>44</sup>.

<sup>42</sup> Section 52 of the BR

<sup>&</sup>lt;sup>40</sup> Section 77 of the BR

<sup>&</sup>lt;sup>41</sup> Section 40 of the BR

<sup>&</sup>lt;sup>43</sup> Section 53 of the BR

<sup>&</sup>lt;sup>44</sup> Section 40 of the BR

#### Restrictions

The BR restricts who can sign a stage inspection certificate for some stages for single detached class 1a buildings and class 10 buildings or structures. These restrictions do not apply to other classes of buildings.

However, for **all classes of buildings**, if the inspecting person for the stage is a competent person (inspection), the competent person cannot sign the stage inspection certificate if they are the builder for the work or carried out building work for any aspect of the stage.

#### At final / completion

A building certifier may give the owner either:

- a certificate of occupancy for the whole of, part of or alterations to a building
- an interim certificate of occupancy
- a further certificate of occupancy.

The type of certificate given will depend upon the work being certified.

#### Certificate of occupancy for the whole of, part of, or alteration to a building

A building certifier must give the owner a certificate of occupancy if:

- the certifier has carried out an inspection and has either:
  - o decided the building has been substantially completed
  - o decided that the alterations to an existing building have been substantially completed
  - given written consent to occupy part of the building before all of it has been substantially completed, and
- the applicant has given the certifier a list of all fire safety installations installed in the building and drawings showing their location, and
- any requirement under the building assessment provisions or a condition of the BDA for a referral agency inspection has been complied with or has ceased to apply<sup>45</sup>.

#### A building has been **substantially completed** when:

- all wet areas are waterproof as required under the building assessment provisions
- reticulated water is connected to and provided throughout the building
  - all sanitary installations are installed as required under the building assessment provisions, and either: • the local government has issued a final inspection certificate under the *Plumbing and Drainage Act*
  - 2018 stating the plumbing or drainage work for the building has been finalised under that Act or o a notice of notifiable work carried out for the building has, on the completion of that work, been given
  - a notice of notifiable work carried out for the building has, on the completion of that work, been given to the commissioner under the *Plumbing and Drainage Act 2018*, section 83(1)
- all fire safety installations are operational and installed as required under the building assessment provisions
- all health and safety matters relating to the building comply with the building assessment provisions
- electricity supply is connected to the building to the extent necessary for it to be used under the BCA classification sought
- the building is weatherproof as required under the building assessment provisions
- the building is structurally adequate as required under the building assessment provisions
- all means of access and egress to the building comply with the building assessment provisions
- if the relevant development approval includes conditions advised or required by a referral agency and the conditions are about the building work for the building – the conditions have been complied with<sup>46</sup>.

The approved form for a certificate of occupancy is Form 11 - Certificate/Interim certificate of occupancy.

<sup>&</sup>lt;sup>45</sup> Section 102 of the BA

<sup>&</sup>lt;sup>46</sup> Section 101 of the BA

The certificate of occupancy must state:

- the building's classification (having regard to the classification stated in the decision notice for the BDA, and the use for which the building was designed, built or adapted)
- the type of building or the use for which the building was designed, built or adapted (having regard to any
  particular categories of uses under the classification and restrictions about use under the BCA or
  Queensland Development Code (QDC)
- the part of the building to which each classification relates (where relevant)
- any BCA or QDC building solution used, and any use or occupation restriction or management procedure applicable to the building solution
- any performance solution used, and the materials, systems, methods of building, management procedures, specifications and other things applicable to the performance solution<sup>47</sup>.

The building certifier must personally sign the certificate of occupancy. An electronic signature may be used in accordance with the *Electronic Transactions (Queensland) Act 2001*.

The certificate of occupancy continues in force until and unless it is replaced. A certificate of occupancy is replaced when a building certifier approves a BCA classification or use change to a building<sup>48</sup>.

**Note:** If the inspection is also for the **final stage**, then a stage inspection certificate must also be given<sup>49</sup>. Refer to the Work complies, Stages section of this guideline.

Paperwork must be sent to the relevant parties within the required timeframes as shown in the table below.

Give documents to	Documents	Timeframe
Owner	Certificate of occupancy	As soon as practicable *50
Local government (Council)	<ul><li>Copy of certificate of occupancy</li><li>Copy of all inspection documentation</li></ul>	Within five business days of either giving the certificate of occupancy or accepting all inspection certificates <sup>51</sup>
Referral agency **	<ul> <li>Copy of certificate of occupancy</li> <li>Copy of plans and specifications showing the aspects of the completed work relevant to the referral agency's functions</li> <li>A list of all fire safety installations and their locations within the building (if QFES is the agency)</li> </ul>	Within 10 business days after giving the certificate of occupancy <sup>52</sup>
QBCC commissioner ***	Details of the certificate of occupancy	Within five business days of giving the certificate of occupancy <sup>53</sup>

- \* If applicable, the certifier cannot give the certificate of occupancy until the requirement for a referral agency inspection has either been complied with or has ceased to apply.
- \*\* Applicable where a referral agency must be given a notice to inspect the building.
- \*\*\* Applicable where the certificate of occupancy is for a building that includes a regulated pool or is for a building on land on which a regulated pool is situated.

- <sup>49</sup> Section 53 of the BR
- <sup>50</sup> Section 102 of the BA
- <sup>51</sup> Sections 108 and 149 of the BA
- 52 Section 107 of the BA

<sup>&</sup>lt;sup>47</sup> Section 103 of the BA

<sup>&</sup>lt;sup>48</sup> Section 106 of the BA

<sup>53</sup> Section 246AP of the BA

#### Interim certificate of occupancy

A building certifier may give the owner an interim certificate of occupancy, pending the carrying out of an inspection if it is not practicable for the certifier to inspect the building to determine whether it has been substantially completed, due to the remoteness of the building's location<sup>54</sup>.

The approved form for an interim certificate of occupancy is <u>Form 11 – Certificate/Interim certificate of occupancy</u>.

The interim certificate of occupancy must state:

- that it is an interim certificate
- an expiry date
- all the same contents as for a certificate of occupancy which are:
  - the building's classification (having regard to the classification stated in the decision notice for the BDA, and the use for which the building was designed, built or adapted)
  - the type of building or the use for which the building was designed, built or adapted (having regard to any particular categories of uses under the classification and restrictions about use under the BCA or QDC)
  - o the part of the building to which each classification relates (where relevant)
  - any BCA or QDC building solution used, and any use or occupation restriction or management procedure applicable to the building solution
  - any performance solution used, and the materials, systems, methods of building, management procedures, specifications and other things applicable to the performance solution.

The interim certificate may be based on information given to the building certifier by or for the owner of the building.

The building certifier must personally sign the interim certificate of occupancy. An electronic signature may be used in accordance with the *Electronic Transactions (Queensland) Act 2001*.

An interim certificate of occupancy expires when the earlier of the following happens:

- the certifier inspects the work and gives a certificate of occupancy
- the end of six months after the interim certificate is given
- the building certifier cancels the interim certificate.

**Note:** A building certifier can only cancel an interim certificate of occupancy on the ground that the basis on which it was issued was incorrect.

Paperwork must be sent to the relevant parties within the required timeframes as shown in the table below.

Give documents to	Documents	Timeframe
Owner	Interim certificate of occupancy	As soon as practicable <sup>55</sup>
Local government (Council)	<ul><li>Copy of interim certificate of occupancy</li><li>Copy of all inspection documentation</li></ul>	Within five business days of either giving the interim certificate of occupancy or accepting all inspection certificates <sup>56</sup>
QBCC commissioner ***	Details of the interim certificate of occupancy	Within five business days of giving the interim certificate of occupancy <sup>57</sup>

\*\*\* Applicable where the interim certificate of occupancy is for a building that includes a regulated pool or is for a building on land on which a regulated pool is situated.

<sup>&</sup>lt;sup>54</sup> Section 104 of the BA

<sup>&</sup>lt;sup>55</sup> Section 102 of the BA

<sup>&</sup>lt;sup>56</sup> Sections 108 and 149 of the BA

<sup>&</sup>lt;sup>57</sup> Section 246AP of the BA

# Further certificate of occupancy (for a further completed part of an unfinished building i.e. a building occupied in stages)

A building certifier must give the owner a further certificate of occupancy for a further part of a building if:

- the certifier has carried out an inspection and consents to the occupation of a further part of the building
- the owner has previously been given a certificate of occupancy for another part of the building and
- the building remains unfinished<sup>58</sup>.

The approved form for a further certificate of occupancy is <u>Form 11 – Certificate/Interim certificate of occupancy</u>.

The further certificate of occupancy must state:

- all the same contents as for a certificate of occupancy which are:
- the building's classification (having regard to the classification stated in the decision notice for the BDA, and the use for which the building was designed, built or adapted)
- the type of building or the use for which the building was designed, built or adapted (having regard to any particular categories of uses under the classification and restrictions about use under the BCA or QDC)
- o the part of the building to which each classification relates (where relevant)
- any BCA or QDC building solution used, and any use or occupation restriction or management procedure applicable to the building solution
- any performance solution used, and the materials, systems, methods of building, management procedures, specifications and other things applicable to the performance solution<sup>59</sup>.

The building certifier must personally sign the further certificate of occupancy. An electronic signature may be used in accordance with the *Electronic Transactions (Queensland) Act 2001*.

A further certificate of occupancy continues in force until and unless it is replaced. A further certificate of occupancy is replaced when a building certifier approves a BCA classification or use change to a building<sup>60</sup>.

**Note:** If the inspection is also for the **final stage**, then a stage inspection certificate must also be given. Refer to the Work complies, Stages section of this guideline<sup>61</sup>.

Paperwork must be sent to the relevant parties within the required timeframes as shown in the table below.

Give documents to	Documents	Timeframe
Owner	Further certificate of occupancy	As soon as practicable *62
Local government (Council)	<ul><li>Copy of further certificate of occupancy</li><li>Copy of all inspection documentation</li></ul>	Within five business days of either giving the further certificate of occupancy or accepting all inspection certificates <sup>63</sup>
Referral agency **	<ul> <li>Copy of further certificate of occupancy</li> <li>Copy of plans and specifications showing the aspects of the completed work relevant to the referral agency's functions</li> <li>A list of all fire safety installations and their locations within the building (if QFES is the agency)</li> </ul>	Within 10 business days after giving the further certificate of occupancy <sup>64</sup>
QBCC commissioner ***	Details of the further certificate of occupancy	Within five business days of giving the further certificate of occupancy <sup>65</sup>

58 Section 105 of the BA

- <sup>59</sup> Section 103 of the BA
- <sup>60</sup> Section 106 of the BA
- <sup>61</sup> Section 53 of the BR
- <sup>62</sup> Section 102 of the BA
- <sup>63</sup> Sections 108 and 149 of the BA
- <sup>64</sup> Section 107 of the BA

65 Section 146AP of the BA

- \* If applicable, the certifier cannot give the further certificate of occupancy until the requirement for a referral agency inspection has either been complied with or has ceased to apply.
- \*\* Applicable where a referral agency must be given a notice to inspect the building.
- \*\*\* Applicable where the further certificate of occupancy is for a building that includes a regulated pool or is for a building on land on which a regulated pool is situated.

### Work that does not comply

#### **Stages**

#### Noncompliance notice

A building certifier must give the builder a noncompliance notice if the certifier:

- has carried out an inspection in accordance with best industry practice
- is not satisfied all relevant aspects of the stage have been completed and comply with the BDA for the work<sup>66</sup>.

The approved form for a noncompliance notice is *Form 61 – Noncompliance notice*.

The noncompliance notice must state:

- that the stage does not comply with the BDA
- how the stage does not comply with the BDA
- the work required to ensure the stage complies with the approval<sup>67</sup>.

If the builder for the assessable building work is given a noncompliance notice, the builder must:

- · perform the work necessary to ensure the stage complies with the BDA
- give the building certifier notice to inspect the stage once the work is complete<sup>68</sup>.

If the builder does not perform the necessary work and give the certifier notice to inspect, the building certifier (the issuing authority) must give the builder a show cause or enforcement notice<sup>69</sup>.

If the inspection includes a pool and the owner has not taken, or is not taking appropriate action to ensure the pool complies with the pool safety standard, the private certifier (class A) must give the owner a show cause or enforcement notice. If the owner does not comply with an enforcement notice, the certifier must notify the local government as soon as practicable<sup>70</sup>.

#### **Competent person notice**

A competent person (inspection) must give the builder and the building certifier for the assessable building work a notice if the competent person:

- · has carried out an inspection in accordance with best industry practice
- is not satisfied all relevant aspects of the stage have been completed and comply with the BDA for the work<sup>71</sup>.

The approved form is <u>Form 62 – Notice that the stage of work does not comply (Appointed competent</u> <u>person)</u>.

The notice must state:

- that the stage does not comply with the BDA
- how the stage does not comply with the BDA<sup>72</sup>.

- <sup>67</sup> Section 54(2) of the BR
- <sup>68</sup> Section 55 of the BR
- <sup>69</sup> Section 56 of the BR
- <sup>70</sup> Section 246ATA of the BA
- <sup>71</sup> Section 54 of the BR  $\frac{72}{72}$  Section 54(3) of the BR

<sup>66</sup> Section 54 of the BR

If the building certifier is given a notice from a competent person, the certifier must either:

- give the builder a noncompliance notice (<u>Form 61 Noncompliance notice</u>), if not satisfied the stage complies with the BDA
- give the builder an inspection certificate (*Form 16 Inspection certificate*), if satisfied the stage complies with the BDA<sup>73</sup>.

#### Show cause and enforcement notice

If a building certifier has given the builder a noncompliance notice, and the builder does not perform the necessary work and give the certifier a notice to inspect, the building certifier (the issuing authority) must take enforcement action against the builder<sup>74</sup>.

Enforcement action means the giving of a show cause or enforcement notice under chapter 9 of the BA or acting under chapter 5, part 3 of the *Planning Act 2016* (PA).

If an enforcement notice is given and the builder does not comply with it, the building certifier (the issuing authority) must notify the QBCC. If the issuing authority is a private certifier (class A) they must also notify the local government.

**Note:** The issuing authority means the person who issued the BDA and can be either a private certifier (class A) or the relevant local government.

#### At final / completion

#### Information notice

A building certifier must give the applicant or client an information notice if the certifier decides not to give a certificate of occupancy because the building has not been substantially completed<sup>75</sup>.

An information notice is a notice stating:

- the decision, and the reasons for it
- all rights of appeal against the decision under the PA
- how the rights are to be exercised<sup>76</sup>.

There is no mandatory or recommended form for an information notice.

**Note:** The requirement to give an information notice is **in addition to** the requirement to give either a noncompliance notice or competent person notice (depending upon who is inspecting the work). For giving these notices, refer to the Work does not comply, Stages section of this guideline.

**Note:** It may also be necessary to give a show cause or enforcement notice if compliance with either a noncompliance notice or competent person notice is not achieved. For issuing show cause or enforcement notices, refer to the Work does not comply, Stages section of this guideline.

<sup>&</sup>lt;sup>73</sup> Section 54(4) of the BR

<sup>74</sup> Section 56 of the BR

<sup>75</sup> Section 124 of the BA

<sup>&</sup>lt;sup>76</sup> Schedule 2 of the BA

# Documentation

### Inspection documentation – definition

The BA defines 'inspection documentation'<sup>77</sup> as the following documents given for building work:

- A compliance certificate
  - o Form 15 Compliance certificate for building design or specification
  - o Form 29 Compliance advice for building work
- A notice given to the builder for the work by or for the building certifier about an inspection of the work
  - Form 61 Noncompliance notice
  - Form 62 Notice that the stage of work does not comply (Appointed competent person)
- A certificate about an inspection under the BA
  - Form 16 Inspection certificate
- A final inspection certificate
  - Form 17 Final inspection certificate swimming pools and swimming pool fencing
  - Form 21 Final inspection certificate
- A certificate of occupancy
  - Form 11 Certificate/Interim certificate of occupancy
- A certificate relating to the inspection of building work relied on by the relevant building certifier
  - Form 12 Aspect inspection certificate (Appointed competent person)
  - o Form 43 Aspect certificate (QBCC licensee).

# Documentation required onsite

While the building work is being carried out onsite, the applicant for the BDA (client or the owner) must ensure at least one legible set of current drawings (plans, specifications) are available for inspection by anyone who is entitled to inspect the work, including a building certifier, competent person or the QBCC<sup>78</sup>.

The applicant may make available electronic copies of the current drawings, plans and specifications for the BDA as long as it is a complete set of documents and are **always** available and accessible on the construction site for inspection.

# Documentation requested by the owner

An owner may request copies of inspection documentation from the building certifier before the building certifier inspects the final stage of work.

The request can only be made if:

- · the certifier has inspected an earlier stage of work
- the earlier stage complies
- the certifier has given an inspection certificate for the earlier stage<sup>79</sup>.

To request the inspection documentation, the owner may use recommended <u>Form 35 – Owner request for a</u> <u>copy of inspection documentation</u>.

If the building certifier receives a request from the owner, the certifier must give the owner all inspection documentation within five business days (unless they have a reasonable excuse).

<sup>&</sup>lt;sup>77</sup> Schedule 2 of the BA

<sup>78</sup> Section 73 of the BA

<sup>79</sup> Section 124A of the BA

Note: Refer to the Inspection documentation section for which documents are inspection documentation.

### Documentation where an engagement is discontinued

Where an engagement of a private certifier is discontinued, paperwork must be sent to the relevant parties within the required timeframes as shown in the table below.

Give documents to	Documents	Timeframe
Owner	Copy of all inspection documentation	Within 5 business days of either the discontinuance or after the certifier accepts the inspection certificates <sup>80</sup>
Local government (Council)	<ul><li>Copy of the discontinuance notice</li><li>Copy of all inspection documentation</li></ul>	Within 5 business days of all parties being given notice of the discontinuance <sup>81</sup>

The approved form for a discontinuance notice is Form 22 - Notice of discontinuance of engagement.

# Documentation where a Building Development Approval lapses

Where a BDA lapses, paperwork must be sent to the relevant parties within the required timeframes as shown in the table below.

Give documents to	Documents	Timeframe
Owner	Copy of all inspection documentation	Within 5 business days of lapsing <sup>82</sup>
Local government (Council)	<ul><li>Copy of the reminder notice</li><li>Copy of all inspection documentation</li></ul>	Within 5 business days of lapsing <sup>83</sup>

The recommended form for a reminder notice is Form 57 - Reminder notice for the lapsing of an approval.

# Record keeping

#### Inspection documentation

A private certifier must keep all inspection documentation for building work for which the private certifier is engaged for at least seven years after the building work is completed<sup>84</sup>.

Note: Refer to the Inspection documentation section for which documents are inspection documentation.

#### **Competent person documentation**

If a building certifier decides an individual is a competent person to give inspection help, the certifier must keep a record stating the following matters in their decision<sup>85</sup>:

- the competent person's name
- details of the matters for which the individual was decided to be a competent person
- the date the decision was made
- documents or information relied upon to make the decision
- the building certifier's reasons for the decision.

The building certifier must keep the record for at least seven years from the day the decision was made<sup>86</sup>.

<sup>&</sup>lt;sup>80</sup> Section 148 of the BA

<sup>&</sup>lt;sup>81</sup> Sections 144 and 149 of the BA

<sup>&</sup>lt;sup>82</sup> Section 122 of the BA

<sup>&</sup>lt;sup>83</sup> Section 149 of the BA

<sup>&</sup>lt;sup>84</sup> Section 150 of the BA

<sup>&</sup>lt;sup>85</sup> Section 36 of the BR <sup>86</sup> Section 36 of the BR

# Managing the process

# Effective communication

There is a diverse range of people involved in the construction of a modern building. A building certifier needs to develop effective communication strategies with all these people. Identifying risks, ensuring the availability of detailed plans, and developing inspection schedules will be of little value if they are not supplemented by effective, ongoing communication. This is particularly important where there has been design or other changes throughout the construction of the building that have not been made known to the building certifier.

Communication with all relevant parties, including fire safety engineers, throughout the construction project is critical. Clear and concise communication will avoid misunderstandings, delays, and issues down the road.

A tragedy at the Riverside Golf Club in South Australia in 2002 highlighted the fact that each specialist area tends to communicate to its own very limited field of participants and not to the broader group of consultants, contractors, and other professionals. The incident involved the collapse of a trussed roof within the dining room of the golf club, resulting in the death of two patrons and injury to another eight. In this case, the coronial inquest was told that the collapse was caused by the failure of a double girder timber truss which was installed during renovations in 1995. The Coroner, in inquest 35 and 36/2004 made comments in relation to the way in which different participants in the building industry communicate or, rather, fail to communicate well. The Coroner commented that it was clear from the evidence in the inquest that the building industry is highly compartmentalised. The Coroner noted that this compartmentalisation "may have resulted in less communication between the respective compartments rather than more."

Simply conveying a piece of information to another party may not be enough if the party is not aware of the significance of the information. In complex buildings there may be a broad cross-section of consultants and other building professionals all responsible for various building systems and components. It is inevitable that these systems and components will in some way integrate with each other as part of the complete building. For example, a mechanical ventilation system operating as smoke extraction may pass through elements of construction (e.g. walls and floors). The construction of both elements is managed by different practitioners who must communicate effectively to ensure that each system complements the other so that compliance is achieved.

A building certifier has responsibility to ensure the completed building complies with the approval and BCA. Therefore, it is crucial that everybody involved in the building process has established clear lines of open communication to share information. To help achieve this, a building certifier should, as far as practicable, encourage communication between relevant practitioners at the beginning of a project. For example, a building certifier, upon approval, could arrange to meet practitioners responsible for managing a building project to establish the extent of the construction program and key areas requiring inspection. At this point the building certifier could emphasise to the building contractor the importance of being notified of any changes to relevant practitioners involved in the project.

# Managing changes during construction

### Changes to design or construction of a building

The more complex the building project, the higher the likelihood of changes to design or specifications or other crucial elements throughout the construction phase. While this is considered normal for complex projects, it can potentially cause significant problems with overall compliance with the BCA.

As part of the communication strategy, building certifiers should request that they be advised of any proposed changes to the construction of a building. Even the smallest changes can impact on whether a building complies with the BCA.

Building certifiers should consider the potential for consequential implications of any change and whether additional checking is required. A lack of communication may result in significant rescheduling of inspections which subsequently impacts on costs and project timeframes. Departures from the approved plans, such as changing the waterproofing treatment to an external balcony from a thin membrane to a thick mortar bed, can impact on the final critical dimension of the balustrade height. If this is not made known to the building certifier when it occurs, and construction continues, it may result in significant, time-consuming and costly remedial work. Regular audits by the building certifier will minimise the likelihood of these changes remaining undetected.

For further guidance on managing variations, refer to the document titled *Design acceptance, Model guidance on BCR recommendations 13-16* published by the ABCB.

# Change of practitioners

Like changes in the construction of a building, when changes of practitioners occur during a building project it can potentially cause compliance issues, such as alterations to the design without a BDA variation being made. The building certifier must also be satisfied with the level of competence of the new practitioner.

If a specific component, such as a fire safety installation of the building, is under the control of a new practitioner (including one relating to a design and construct contract), a building certifier will need to assess the work to ensure continued compliance with the approval and BCA. If a new assessment is required, it must be carried out promptly so as not to interfere with the construction program. It will also ensure that any impacts on other systems or building components are understood and checked for continued compliance.

A building certifier should always assess the impacts of changes (in practitioners) on systems and the various building components.

### **Changes to owners**

If the builder is the client (not the owner), they must, within 10 business days after the engagement starts, give the private certifier the owner's name and contact details<sup>87</sup>. They must also notify the certifier of changes to the owner's name and contact details within five days of becoming aware of a change.

<sup>87</sup> Section 143A(2) of the BA

# Appendix 1 – Developing an inspection schedule

# Risk matrix: a tool for establishing a sufficient inspection schedule for class 2 to 9 buildings

The use of a risk-based approach to developing and implementing a sufficient inspection schedule can be achieved through a risk matrix that assigns a rating to a building based on certain criteria.

The risk rating assists the building certifier in determining an inspection schedule, including the type and frequency of inspections required.

Certifiers are the best-placed professionals to adopt the risk-based approach as they are the single point at which all records for the building are held, including design, specification and inspection documents. However, building certifiers should ensure the risk-based approach is a shared principle by working with all building professionals involved in the building process.

#### How to use the risk matrix

The risk matrix contained in this guideline identifies three risk levels: low, medium, and high. To establish the risk level, a building is assessed against five risk factors. Each risk factor contains broad criteria against which to compare buildings so that a risk level can be established.

A risk level is established if all the criteria under a particular level are met. For example, a building will be considered to have a low-risk level if it meets and does not exceed any of the risk factor criteria for that level. If one or more risk factors under the low-risk level is exceeded, the building's risk level would be increased to the next relevant level.

This matrix is a guide to establishing the level of risk. There may be development proposals that present unique risk factors that are not specifically addressed. In these cases, the matrix should be considered in context, along with any additional unique factors, to arrive at a logical level of risk for a proposal.

Risk factor	Risk level		
	Low-risk	Medium risk	High-risk
Building classification	Building is a class 2, 3, 4 (part of a building), 5, 6, 7 or 8 and has a rise in storeys of less than three storeys.	Building is class 2, 3, 4 (part of a building), 5, 6, 7 or 8 and has a rise in storeys of more than three storeys.	Building is class 9 or of any class determined to be of importance level 3 or 4 in accordance with the BCA.
Height/floor area	Not greater than three storeys above the ground. Fire compartments do not exceed the provisions of BCA Table C2.2.	More than three storeys above ground but no more than 25 metres in height.	Contains fire compartments exceeding the provisions of BCA Table C2.2. More than 25 metres in height.
Performance solutions	No performance solution – proposal meets deemed-to- satisfy provisions of BCA.	Incorporates performance solution not involving fire safety installations.	Incorporates performance solution involving fire safety installations.
Experience of the design and building team	Practitioners designing and constructing the building have been involved with more than three buildings of the same classification.	Practitioners designing and constructing the building have been involved with, and completed, fewer than three buildings of the same classification.	Practitioners designing and constructing the building have no previous experience relating to the proposed classification or building type.
Climatic conditions	Area is not impacted upon by known risks e.g. flood, bushfire, earthquake, cyclone, landslip.	Area has known risks e.g. flood, bushfire, earthquake, landslip, contaminated land. Building is not a class 9.	Area has known risks e.g. flood, bushfire, earthquake, landslip, contaminated land. Building is a class 9.

#### **Risk factors**

The risk matrix comprises factors that are most likely to pose an element of risk for those occupying a building. These risk factors range from the physical size of a building to its classification under the BCA. Also included are criteria relating to the experience of the design and building team. While this aspect is not directly aligned with the requirements of the BCA, it is an important issue to consider in the context of a building certifier's statutory functions.

The BCA is structured in a way that sets out standards of construction based on general risk to the occupants of a building. For example, the BCA provides that a single storey shop with a floor area of less than 500 m<sup>2</sup> can be constructed to a lower fire resistance level than a four-storey shop with a floor area exceeding 2000 m<sup>2</sup>.

This reflects the higher risks to occupants required to exit a multi-storey building in the event of an emergency. A multi-storey building under fire conditions must be capable of maintaining structural integrity so that people can evacuate safely.

The BCA also recognises that buildings of a public nature such as public halls, hospitals and aged care facilities pose greater risks to occupants than buildings used for bulk storage or manufacturing processes. Public buildings pose unique risks to occupants who may be incapable of evacuating a building without assistance.

The risk factors and their criteria are broadly aligned with those set out in the various parts of the BCA.

The following is an overview of each risk factor in the risk matrix and the general criterion for the different risk levels:

#### **Building classification**

The BCA classifies buildings according to their use which in turn reflects the level of risk to which occupants are exposed. Generally, the system of classification places buildings into three use categories:

- residential buildings (includes classes 2, 3 and 4)
- commercial buildings such as offices, shops, warehouses and factories (includes classes 5, 6, 7 and 8)
- buildings of a public nature such as halls, hospitals and aged care facilities (class 9 buildings).

The risk matrix has allocated a level of risk to the various use categories considering the rise in storeys and vulnerability of the occupants.

Essentially, it is considered that all building classes, except for class 9 buildings, with a rise in storeys not exceeding three can be considered as low-risk. The medium-risk level applies to all building classes, except class 9 buildings, that have a rise in storeys of more than three. The high-risk level includes class 9 buildings and any class of building that has been determined to have an importance level of 3 or 4 in accordance with the BCA.

#### Height and floor area

Buildings are considered to pose less risk to occupants where the rise in storeys is no greater than three and the size of fire compartments does not exceed the maximum areas set out under the BCA. The required level of fire resistance and the type of fire safety installations required under the BCA mean occupants can generally evacuate quickly and safely to open space.

Buildings greater than three storeys are subject to more complex requirements relating to fire resistance and have more complex fire safety installations. These requirements reflect the increased risks to occupants. This is particularly important in those buildings involving permanent residency, where people sleep on a regular basis or where residents have high levels of dependency.

#### **Performance solutions**

As a performance-based document, the BCA provides a framework for solutions that comply with performance requirements that can be achieved by altering or departing from the prescriptive deemed-to-satisfy requirements. Departing from the deemed-to-satisfy requirements of the BCA often means that a building must comply with a complex, one-off, specific design. The design will generally involve the coordination of multiple systems or methods of construction within a building.

Commonly, performance solutions address changes to the type and level of fire safety installations incorporated in a building. These solutions directly relate to occupant safety and will require a high level of scrutiny to ensure compliance. The use of performance solutions involving fire safety installations will therefore place the building into the high-risk level so that an appropriate amount of attention is paid to the inspection frequency and type.

Some performance solutions relate to non-fire related matters such as access for people with disabilities or health and amenity issues such as ceiling heights and room sizes. While these solutions are as equally important as those relating to fire safety, they are considered to attract less risk.

#### Experience of the design and building team

The experience of practitioners involved in designing and constructing a building is important in assessing risk.

Architects, engineers and building practitioners who have worked on similar projects for a significant period of time or have continually worked on complex building projects are likely to have an understanding of shortfalls or areas of potential danger in the construction of class 2 to 9 buildings.

If the design or building practitioners have limited experience working on a large or complex building, they may lack requisite knowledge about important aspects and pitfalls associated with the particular class of building. The role of the building certifier in this circumstance becomes even more crucial in minimising risk.

#### **Climatic conditions**

Queensland has unique climatic conditions compared with other Australian states and territories. These impact on the way a building must be designed to ensure structural adequacy and occupant safety. For example, northern areas of Queensland are subject to cyclones and storm surge. A significant proportion of Queensland is subject to flooding and resultant consequences such as landslip. Some areas are also prone to bushfire attack and to some extent, earthquakes or seismic ground movement.

The effects of all these conditions must be considered and incorporated into both the design and construction of buildings to ensure structural adequacy and occupant safety. Climatic conditions pose increased risk for class 2 to 9 buildings where a number of occupants have mobility impairment (such as health or aged care facilities) as these may take longer to evacuate in the event of natural disaster.

#### Inspection schedule – low-risk level

A low-risk building is typically not very complex. It will generally be of any class, except class 9, and not likely to exceed three storeys in height. The building would also be subject to compliance with the deemed-to-satisfy provisions of the BCA.

There may be large variations in the complexity of construction of buildings that fall into this risk level depending on the classification. For example, a class 7 warehouse will have relatively simple fire safety requirements in terms of construction type and egress and there may not be a need to construct fire-resisting walls or have complex fire safety requirements such as fire detection and alarm systems.

By comparison, a class 2 building with a rise in storeys of three, while still in the low-risk level, would contain more complexities than a simple warehouse. In this case, there would be a need to increase the number of inspections of critical areas to ensure compliance with the BDA and the BCA.

A schedule of inspections in the key areas listed below should be established to complement the construction program.

This will ensure sufficient inspections are carried out at the most appropriate time and while the area is accessible e.g. penetration through fire-rated elements of construction.

For buildings in the low-risk level, inspection schedules should be developed considering the following:

- preliminary building layout and site requirements
- fire safety requirements
- health and amenity.

Example 1 in this guideline provides a typical inspection schedule for a building considered to be low-risk under the risk matrix.

#### Preliminary building layout and site requirements

The building certifier should be satisfied that the layout of the overall building on the site is in accordance with the BDA, which includes the planning permit.

Confirmation of this information at this early stage aims to reduce the risk of the building being in a position that is not in accordance with approval documents. It will also reduce the risk of potential interference with service infrastructure, easements and other site-related requirements e.g. flood levels, building height restrictions, boundary clearances, and fire-source features, etc.

#### Fire safety requirements

Fire safety requirements may differ across the various classes of buildings, potentially being more complex for buildings of a public nature or residential use when compared with general commercial buildings such as warehouses and factories.

Fire safety requirements can also be broken down to those methods that make up fire safety installations. These can include a combination of both passive and active systems such as the construction of fire-rated walls and ceilings, fire-stop collars separating floors, smoke hazard management, automatic or manual fire suppression systems and methods such as provision for safe evacuation from the building. These should be inspected at a time when they are accessible and able to be clearly viewed.

An inspection schedule must be established with consideration given to the complexity of fire safety installations, the number of storeys in the building and the construction program. For example, a three storey, class 2 building may contain multiple fire safety installations.

It may be appropriate that these fire safety installations are inspected as each level of the building reaches a stage in the construction program that precedes wall and ceiling finishes. It is beneficial to audit items such as walls, ceilings and service penetrations for appropriate fire resistance levels. It may be convenient to audit the construction of those same building elements that include acoustic construction.

Other fire safety installations such as fire detection and alarms can be inspected at a later stage in the construction program which coincides with testing and commissioning. This can be near the completion of the building work or at various stages towards the end depending on the type and complexity of the actual system.

The inspection of fire safety installation requirements at appropriate times will reduce the risk of these systems being incorrectly installed. Identifying noncompliant fire safety requirements early in the construction process will permit corrective or remedial action to be taken without causing further delays or additional costs to the completed project.

#### Health and amenity

The components of a building that relate to health and amenity can include elements such as handrails and balustrades, natural and mechanical ventilation and lighting (for habitable rooms and areas). Some elements relating to health and amenity may be best inspected at a stage where the building work is nearing completion. Other elements will benefit the inspection schedule when inspected at an earlier stage.

Elements of construction including ceiling heights, doorway and passageway widths (accessibility features), room sizes, floor surfaces and gradients should be inspected as early as possible in the construction phase. This will allow greater opportunity for remedial or corrective measures to be undertaken if full compliance is not being achieved.

Items such as finished handrail and balustrade heights, lighting and ventilation are more appropriately inspected towards the completion phase of building work. Conducting regular audits of these items throughout the construction of the building will significantly reduce the risks of non- compliant work being carried out or continuing. In the case of repetitive construction items such as handrails and balustrades, early inspections should be carried out to establish compliance. This will avoid the possibility of costly mistakes or errors being compounded, or discovered, towards the end of the project.

#### Example 1

A single storey, class 7 warehouse building is proposed for construction on industrial land. The floor area is 1000 m<sup>2</sup> and one wall of the building containing doors and windows is 1.5 metres from a side boundary. This side is to form part of the fire safety egress to the road at the front of the property. The building also contains a small mezzanine with stair access.

The external walls are to be constructed using concrete tilt panels attached to a portal frame. A sewer main runs across the property and part of the building requires the footing system to bridge this infrastructure.

The building will require a fire detection and alarm system and part of the rear fire exit must be contained within a fire-rated passageway.

With an understanding of the construction program provided by the builder, the building certifier has determined the following inspection schedule to be appropriate and form part of the conditions of approval for the building work.

	Inspection requirement	Timing
Preliminary building layout and site requirements	Confirm building footprint complies with approval documents and accommodates location of all service infrastructure.	At completion of building set out.
Fire safety	Location of openings in external wall adjacent property boundary.	After positioning of tilt panel.
	Connection of tilt panel to steel portal.	After positioning of tilt panel and prior to placement of roof sheeting.
	Construction of fire-resistant walls to exit passageway.	Upon completion of passageway construction and installation of fire safety door.
	Testing of fire detection and alarm system.	Completion of system installation.
Health and amenity	Damp and weatherproofing of all roofed areas and door and window fixtures.	Prior to completion of building work.
	Sanitary and other facilities.	Prior to completion of building work.
	Other health and amenity elements including light, ventilation, access for people with disability and glazing.	Prior to completion of building work.

**Note:** The inspections set out in this example should not be considered as an exhaustive list. Each building must be considered on its own merits.

#### Inspection schedule – high-risk level

Buildings that fall in the high-risk level often include public buildings or buildings that are substantial in either floor area or rise in storeys or are the subject of complex performance solutions involving fire safety installations. It follows that these types of buildings should have a rigorous inspection schedule that not only reflects the identified risks but also reduces them to ensure occupant safety.

A sufficient inspection schedule will reduce a building certifier's liability and protect the interests of the builder responsible for the overall construction program. A building in this risk level will benefit from frequent audits of multiple areas throughout construction.

As with buildings in the lower risk levels, the following key areas should be sufficiently inspected to ensure compliance:

- · preliminary building layout and site requirements
- fire safety requirements
- health and amenity.

#### Preliminary building layout and site requirements

For some buildings in the high-risk level, site requirements can be significantly more extensive and complicated than those of a lower risk. For example, a high-rise building is likely to include several basement levels that may be used for car parking or other purposes.

In these cases, the building certifier should be satisfied that the layout of the overall building on the site is in accordance with the BDA.

As with buildings of lower risk, confirmation of information relating to the location of a building on the site at an early stage in the construction program will reduce the risk of noncompliance with the BDA. It will also reduce the risk of potential problems relating to water tables, ongoing drainage, service infrastructure and any structural complexities. Note that where 'drainage' is used in this guideline, the reference is to drainage **other than** sanitary drainage.

#### Fire safety requirements

Fire safety requirements for buildings in the high-risk level are likely to be the most complex, particularly if they involve a performance solution. Most of these systems will be incorporated into each level of a high-rise building or across several fire and smoke compartments in buildings such as hospitals and aged care facilities.

As discussed earlier in these guidelines (under Inspection schedule – low-risk level) fire safety requirements can be broken down into those methods that make up fire safety installations. These can include a combination of both passive and active systems such as the construction of fire-rated walls and ceilings, fire-stop collars separating floors, smoke hazard management, automatic or manual fire suppression systems and methods such as provision for safe evacuation from the building.

An inspection schedule should be established that considers the complexity of all fire safety requirements. It would be convenient to audit the elements of these systems at a time when they are accessible and able to be clearly viewed.

In high-rise or multi-level buildings it is likely there will be significant amounts of service penetrations through fire-rated components of construction. As the construction program continues these penetrations will be progressively covered, making visual inspection difficult. To overcome this, an inspection schedule that complements the building program needs to be established. This may mean site visits occur at regular intervals to ensure each level, or a sufficient number of them, are appropriately inspected.

#### Health and amenity

The health and amenity components of a building in the high-risk level will generally reflect those found in lower-risk buildings. However, an inspection schedule to ensure all health and amenity issues are compliant may be more extensive.

In high-rise buildings it is important to structure a sufficient inspection schedule that ensures, at the earliest opportunity in the construction program, that those components that are to be replicated throughout the building are compliant. Construction elements involving safe access and egress, sound attenuation, waterproofing, lighting and ventilation should be inspected to complement the construction program.

#### Example 2

A 25-storey residential building is proposed for construction on a site immediately adjacent to a permanent body of water. The building contains three levels of basement carparking and the ground level will have a mix of commercial and retail uses.

The building is also the subject of a performance solution which involves innovative fire safety installations. These fire safety installations rely on, and operate in conjunction with, passive construction components which include lightweight, fire-resistant walls and ceilings.

Each of the individual residential units contains its own private open balcony and has access to an adjoining unit through a door required to be fire resistant. The builder indicates the carpark levels and ground floor commercial and retail portions of the building are to be completed and occupied before the remainder of the residential tower is complete.

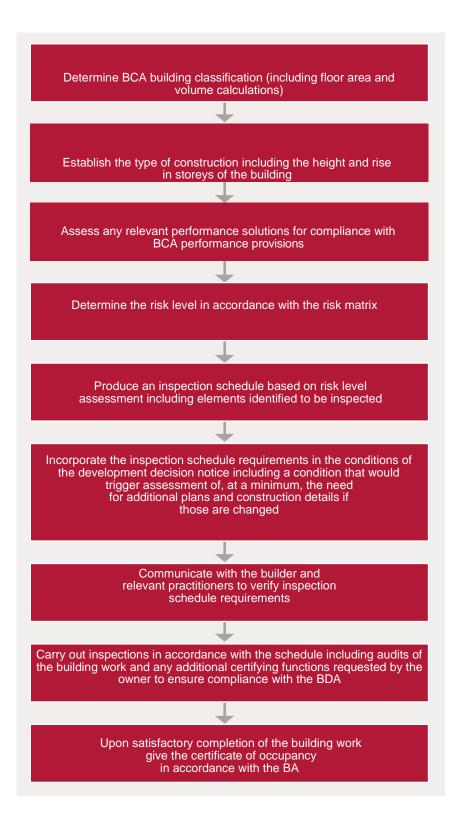
After consultation with the builder, the building certifier established the following inspection schedule.

	Inspection requirement	Timing
Preliminary building layout and site requirements	Confirm building footprint complies with approval documents and accommodates location of all service infrastructure.	On completion of set out.
Fire safety	Construction of all passive fire safety features.	Completion of construction of passive fire safety element at each level prior to application of finished linings.
	Installation of all active fire safety installations.	Completion of system installation prior to final commissioning.
Health and amenity	All items relating to health, safety and amenity under the BDA.	Completion of relevant building work on each level and prior to occupation of any stage.

**Note:** The inspections set out in this example should not be considered as an exhaustive list. Each building must be considered on its own merits.

# Assessment flowchart

The following assessment flowchart will assist building certifiers to assess a building's risk level. The flowchart summarises the steps in establishing a sufficient inspection schedule.



# Appendix 2 – Case studies

### Case study 1

#### Toomey v Scolaro's Concrete Constructions Pty Ltd (in liq) and Others (No. 2) [2001] VSC 2799

While Mr Toomey was standing on the first-floor landing of a stairwell, he was bumped by two friends skylarking, causing him to fall backwards over the balustrade of the landing and fall. He sustained severe injuries which left him an incomplete quadriplegic.

Mr Toomey claimed more than \$3 million damages from several parties, including the building certifier.

The building certifier had relied on a building inspector to give a compliance certificate certifying that, among other things, the height of the balustrade was compliant with the BCA. The balustrade actually measured 933 millimetres instead of the required one metre.

The certifier was found to be vicariously liable for the failings of the building inspector, who was negligent in the inspection.

The certifier was not protected by any legislation allowing building certifiers to rely on compliance certificates, because in this case, the certificate provided by the inspector did not meet the statutory requirements.

A vicarious liability can be defined as the liability created by an action or non-action by another person, working on behalf of the responsible person for all the action or inaction of another person within the limits of their association.

So, when an employee or worker causes a loss to somebody in the normal course of his duty then the employer will be responsible for such loss.

The Court also found that reliance cannot be placed on a certificate where the certifier knew, or had reason to know, it was not the result of a thorough and competent inspection.

In this case, the unusually low rate charged by the building inspector should have alerted the building certifier that the inspector may be likely to cut corners.

This case demonstrates that reliance on competent persons, and certificates given by competent persons, without proper consideration or checking, can indicate that a building certifier has not acted with the requisite level of diligence. Improperly certified building work presents an unacceptable level of risk to the health, safety and amenity of people occupying buildings in Queensland.

This case highlights the important obligation on building certifiers to check plans for accurate and clear compliance with the BCA. There should also be a third-party checking compliance throughout the construction phase. Building certifiers, considering the outcomes of this case, may decide that checking of standard compliance metrics across the various safety provisions of the BCA and standards is necessary.

### Case study 2

#### Hyatt Regency Hotel Walkway Collapse – Kansas City, 1981

The Hyatt Regency Hotel walkway collapse is one of the deadliest structural collapses in the United States of America's history, surpassed only by the collapse of the World Trade Centre in 2001. The disaster killed 114 people and injured 216 others.

One of the defining features of the Hyatt Regency Hotel was its lobby, which featured a multi-level, interior, suspended walkway system. The fourth-floor walkway was suspended directly over the second level walkway, with the third-floor walkway set several metres off to the side.

One year into construction of the Hyatt Regency Hotel, the design of the hanger rod connection supporting the walkway system was changed from a one-rod system to a two-rod system. This meant the weight of two walkways was now held by the same structure designed to hold one. On the day of the disaster, the connection failed, and the fourth-floor walkway collapsed on to the second floor and both walkways then fell to the lobby floor below.

It was found that the mid-construction changes were not properly tested for safety and compliance with the building code. The drawings of the modified design prepared by the engineering firm were preliminary sketches only but were interpreted by the fabricator as finalised drawings. The fabricator subsequently constructed the walkways as per the plans.

Both parties failed to perform basic calculations that would have revealed the design's intrinsic flaws, particularly the doubling of the load on the fourth-floor beams.

This case highlights the need for assessment and approval of changes to construction before they are incorporated into the building. It also highlights the importance of keeping the lines of communication open to ensure any changes are made known to all relevant practitioners and, importantly, the building certifier responsible for approvals.

This case exposed the lack of procedures by several parties to accommodate and document changes throughout construction of the building. The final approval of changes was seen as a crucial omission which reinforces the value of the building certifier's involvement in the building approval process and the inspection of building work.