

Guidelines for special fire services and referrals to the Queensland Fire and Rescue Service

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Scope

The scope of these guidelines is limited to providing building certifiers with guidance about special fire services as defined in Schedule 2 of the *Building Act 1975*, and the jurisdiction of referral agencies in Schedule 7, Table 1, Item 1 of the *Sustainable Planning Regulation 2009*.

Purpose of these guidelines

The purpose of these guidelines is to provide building certifiers with guidance on how to meet their responsibilities for building development applications requiring referral to the Queensland Fire and Rescue Service (QFRS) for advice. The advice is provided at the application stage of a proposed development and after relevant inspections have been carried out by the QFRS. Guidance is also provided about the role of the builder, building certifier and the QFRS in relation to inspection of special fire services.

Legal status of these guidelines

These guidelines are made under section 258 of the *Building Act 1975* which provides for guidelines to be made to help achieve compliance with the *Building Act 1975*.

Section 133A of the *Building Act 1975* requires a building certifier, in performing a function under the *Building Act 1975*, to have regard to the guidelines made under section 258 of the *Building Act 1975*.

Evidence of regard to guidelines made under the *Building Act 1975* may assist a building certifier in the event of a complaint about the performance of a building certifying function.

General legal framework for special fire services and referral to the Queensland Fire and Rescue Service

The *Sustainable Planning Act 2009* provides the legal framework for the assessment of required *special fire services* by the QFRS as an advice agency.

Schedule 7 of the *Sustainable Planning Regulation 2009* requires building work (containing special fire services, or alternative solutions involving a fire safety system) that is assessable against the *Building Act 1975* or the subject of a development application, to be referred to the QFRS for advice.

The advice provided by the QFRS is restricted to those matters set out in the *Sustainable Planning Regulation 2009*. These matters include advice for *fire safety systems* in buildings that require special fire services set out in Schedule 8 of the *Sustainable Planning Regulation 2009*. It also includes an alternative solution assessed against the performance requirements of the Building Code of Australia, Volume 1, or the Queensland Development Code, Part 2.2 – *Fire safety in residential care buildings*, for the fire safety system.

The QFRS is also the referral agency for a building development application which includes an alternative solution assessed against relevant performance requirements of the Building Code of Australia or Queensland Development Code Part 2.3 – *Fire safety in existing residential care buildings (pre-1 June 2007)*.

Schedule 7 of the *Sustainable Planning Regulation 2009* provides that building development applications are required to be referred to the QFRS for advice when a building development application involves the following:

A **fire safety system** for a building if the building work:

- requires special fire services mentioned in Schedule 8, Part 1; or
- includes an alternative solution assessed against the performance requirements of the Building Code of Australia Volume 1, or the Queensland Development Code MP 2.2, for the fire safety system; or
- includes an alternative solution assessed against the relevant performance requirements or the performance criteria in Queensland Development Code MP 2.3, for the fire safety system.

The meaning of 'special fire service' is in Schedule 2 of the *Building Act 1975* and 'fire safety system' is defined in Part A1 the Building Code of Australia.

Appeal mechanisms for advice agencies, the building certifier and any other relevant person are outlined in sections 528 and 532 of the *Sustainable Planning Act 2009*.

Background

Commercial buildings and certain residential buildings are likely to include fire safety systems that involve a special fire service as defined under the *Building Act 1975*. The building certifier is responsible for ensuring relevant building work containing special fire services has been referred to the QFRS for advice. Building certifiers must ensure that QFRS advice has been obtained on an alternative solution involving a fire safety system prior to deciding a development application.

These guidelines are intended to assist with the interpretation of the term 'special fire service' and explain the link between the terms in the Building Code of Australia and the *Building Act 1975* for a 'special fire service'. It will also assist with the identification of the elements making up a special fire service to foster a more consistent approach for referral to the QFRS for advice.

The Building Code of Australia sets out a broad range of requirements that determine what fire safety systems are required to be incorporated into different buildings. The term 'fire safety system' as defined in the Building Code of Australia encompasses combinations of interrelating building features that enhance the fire safety of the building, including both active and passive systems.

The QFRS has an interest in checking the proposed installation detail of special fire services to ensure the services can be effectively used for fire-fighting and operational needs when QFRS officers attend a fire-related emergency in a building. If special fire services are not installed with the practicality of the operational uses in mind, the response by the QFRS to an emergency situation may be adversely affected. Therefore, the role of the QFRS as an advice agency on special fire services is important as it relates directly to its operational requirements.

For example, a fire safety system that includes a special fire service such as fire detection and alarm systems has specific elements the QFRS operates in emergency situations.

The referral jurisdiction under Schedule 8 of the *Sustainable Planning Regulation 2009* for these systems includes such matters as the location and operation of the main fire indicator panel, sub-indicator panels, mimic panels etc. The QFRS is the most appropriate agency to advise on the practical use of these installations.

Another example of a fire safety system included in Schedule 8 of the *Sustainable Planning Regulation 2009* as a special fire service is vehicular access for large isolated buildings. QFRS advice would establish that such matters as turning circles, surface materials, gradients and obstacles etc., are suitable for, or do not impinge on, their operational needs. If they are not suitable, the advice from the QFRS may recommend that conditions be imposed which facilitate suitable alternatives to that proposed under the building development application.

Fire safety systems and special fire services

What is a fire safety system?

The Building Code of Australia defines a fire safety system as follows:

Fire safety system means one or any combination of the methods used in a building to:

- warn people of an emergency; or
- provide for safe evacuation; or
- restrict the spread of fire; or
- extinguish a fire

and includes both active and passive systems.

This definition covers the full range of systems that may be used under the performance provisions of the Building Code of Australia. For example, a method used to restrict the spread of fire can include an active system such as sprinklers or a passive system incorporating fire-rated construction. These methods can also be used in combination with methods for controlling smoke generated from a fire. In this context, fire safety systems in the Building Code of Australia combine to provide a safe environment for building occupants, assist to facilitate fire brigade intervention and incorporate specific measures that are the actual special fire services.

The management of smoke to restrict the spread of fire can include systems that rely on mechanical or natural ventilation. Both these types of systems have specific 'deemed to satisfy' provisions in the Building Code of Australia. They are also integral to the achievement of the goals of the Building Code of Australia in relation to fire safety. Consequently, the *Building Act 1975* categorises them as special fire services and the *Sustainable Planning Act 2009* requires referral to the QFRS as an advice agency for advice about how they are to be used in practice.

Another example of a fire safety system includes a method used to evacuate people from a building in the event of an emergency. Paths of travel to a required exit provide for safe evacuation. Other interrelated systems include door swing, door hardware, emergency lighting, exit signs and in many cases fire detection and alarm systems. In this case, the *Building Act 1975* defines fire detection and alarm systems as a special fire service because they are part of the system that the QFRS routinely uses in its operational role.

What is a special fire service?

Special fire services are the items set out in Schedule 2 of the *Building Act 1975*. The items may include a number of sub-categories. This means there is scope to consider different types of systems that may be covered by one particular special fire service.

For example, the special fire service described as air handling systems for smoke control can include smoke extraction made up of an air purge or zone pressurisation system. The corresponding jurisdiction for smoke control systems (*Sustainable Planning Regulation 2009* Schedule 8, Part 2) requires the QFRS to assess and provide advice on the achievement of specified outcomes of the system.

In another example, the sub-categories for smoke and heat venting systems can include both mechanical and natural ventilation systems. For mechanical ventilation systems, the specified performance outcomes are contained in both the Building Code of Australia and referenced standards such as Australian Standard 1668.1:1998 – The use of ventilation and airconditioning in buildings – Fire and smoke control in multi-compartment buildings.

The specified outcomes for natural smoke venting systems in large isolated buildings set out in Building Code of Australia table E2.2a, are contained in the performance requirements of Part E2. Natural smoke venting systems are permitted to include low level openings that are readily openable. These elements of the system may require operation by the QFRS at the time of an emergency response dealing with fire such as either opening or closing the venting systems in a smoke filled environment. In these cases, advice by the QFRS is vital to ensure its operational needs are met.

In contrast, the same system with permanent openings would not require referral to the QFRS for advice because there is nothing the fire service needs to do to make them function as they are a passive system that would not be used operationally during a fire. However, if the passive venting system was being proposed as an alternative solution, then QFRS advice should be sought to ensure the solution does not have any other unintended impacts on fire fighting operations.

The responsibility for ensuring the proper compliance and function of smoke ventilation systems incorporating permanent openings rests with the building certifier. These types of systems must perform irrespective of any intervention by fire service personnel.

The roles of Queensland Fire and Rescue Service

Role of a building certifier in the referral process

Generally, the role of an appropriately licensed building certifier includes assessing a building development application for compliance against the building assessment provisions set out in the *Building Act 1975*. After an assessment, the building certifier may decide to grant or refuse the building development application.

If building work involves a special fire service or alternative solution for a fire safety system, the building development application must be referred to the QFRS for advice. The applicant for the building work is responsible for ensuring the referral is made, however building certifiers can lodge the referral application on their behalf. If a building development application requires referral to the QFRS for advice, a building certifier must consider any advice or recommendations made by the QFRS before making a decision about the application.

After considering the advice or any recommendations received, a building certifier may decide to approve, approve with conditions or refuse the building development application. If approved, a copy of the decision notice must be provided to the QFRS within five business days after the day the decision is made.

Although the QFRS may have provided advice or recommendations about a referred building development application, the building certifier is responsible for approval of the systems involving the special fire services or fire safety systems included in an alternative solution.

Role of the Queensland Fire and Rescue Service in the referral process

The role of the QFRS as a referral agency is to provide advice about building development applications involving special fire services or fire safety systems as part of an alternative solution.

As an advice agency, the QFRS can make recommendations to an assessment manager for a building development approval. The QFRS can recommend the application be refused, that conditions should attach to the approval or that any approval should be a preliminary approval only.

The QFRS can also recommend that any approval should be for only part of an approval. Alternatively, the QFRS can advise that it has no recommendations.

Role of the builder

The builder plays an important role in the construction process involving fire safety systems within the building. Generally the builder will have control of the coordination of fire safety systems and when they are at a stage that is suitable for inspection.

The primary role of the builder with respect to special fire services is calling for and coordinating inspections by the QFRS. Under section 38 of the *Building Regulation 2006* the builder must give a notice to inspect, to both the QFRS and building certifier, when relevant special fire services are completed.

More details about the builder's role and the inspection of special fire services is set out under the heading 'Inspection of special fire services by the QFRS' in these guidelines.

Alternative solutions and referral to the Queensland Fire and Rescue Service for advice

With continual advances in material and systems technology influencing building design, the use of alternative solutions is becoming more prevalent. Although an alternative solution can be developed for almost any provision in the Building Code of Australia, the most commonly used performance provisions relate to fire safety.

Alternative solutions for building work can be assessed against performance provisions of the Building Code of Australia, (Volume 1) or the performance criteria of Queensland Development Code Parts 2.2 and 2.3. It is important to note that Schedule 7 of the *Sustainable Planning Regulation 2009* only covers building work including an alternative solution for a fire safety system. The fire safety system included in an alternative solution may or may not incorporate special fire services, however referral to the QFRS for advice is still required.

The jurisdiction for the QFRS to provide advice on alternative solutions includes the provisions of Chapters 3 and 4 of the *Building Act 1975*.

Chapter 3 of the *Building Act 1975* sets out the requirements for supporting documents for a building development application. If an alternative solution is used specific information is required about how performance provisions are complied with and how the solution differs from 'deemed to satisfy' provisions of the Building Code of Australia or Queensland Development Code. This will be the information the QFRS base their advice and recommendations upon.

Chapter 4 of the *Building Act 1975* sets out the processes for the assessment of building development applications and the laws under which building work must be assessed. It also provides for conditions that must be imposed on a building development application relating to the inspection of special fire services by the QFRS.

Appendix 1, Example 1, provides an example of an application involving building work that includes an alternative solution for a fire safety system.

Inspection of special fire services by the Queensland Fire and Rescue Service

Building work referred to the QFRS for advice about special fire services will require those services to be inspected.

The QFRS may receive a notice to inspect under a condition imposed by either section 74 of the *Building Act 1975* or section 38 of the *Building Regulation 2006*.

(Refer to *Guidelines for inspection of class 2 to 9 buildings* under the headings 'Inspection schedule – low-risk level and high-risk level').

Section 74 of the *Building Act 1975* - Inspection and testing of special fire service installation

Section 74 of the *Building Act 1975* requires a person who installs a special fire service to notify the QFRS at two stages of installation.

The first stage is while the installation of the service is being carried out but before it is finished. The second stage is after the installation of the service but before interior surface finishes are applied. The person installing the services is also required to notify the assessment manager for the building development approval.

Section 74 of the *Building Act 1975* gives the QFRS the right to inspect and test special fire services if the building is served by special fire services. However, section 74 does not prevent a building certifier imposing specific conditions about the testing and inspection of special fire services.

For example, a building certifier may consider there is a need to test and inspect external special fire services such as hydrant systems or open spaces for vehicular access associated with large isolated buildings. The testing and inspection of these services may be at a different time to that of systems contained within the building such as fire detection and alarm systems.

Section 38 of the *Building Regulation 2006* – Notice to referral agency to inspect

Section 38 of the *Building Regulation 2006* does not apply if the condition is imposed under section 74 of the *Building Act 1975*. Section 74 of the *Building Act 1975* sets out a condition that is taken to be imposed on a building development approval for the QFRS to inspect building work about a special fire service.

A building certifier may also choose to place a condition on a building development approval about other aspects relating to a fire safety system that is not a special fire service. For example, a building development application may be the subject of an alternative solution involving extended travel distances. Due to the alternative solution, the building certifier may choose to place a condition on the building development approval that the QFRS inspect delineated egress paths. This may be for the purpose of establishing that it meets their operational needs in regard to fire fighter intervention.

Under section 38, the builder must give the referral agency a notice to inspect the building work when, under the building development approval, the referral agency aspects are at a stage at which they must be inspected by the agency. The builder is also required to give a copy of the notice to the building certifier when it is given to the referral agency.

Section 39 of the *Building Regulation 2006* applies if the referral agency receives a notice to inspect under section 38 or a notice to inspect the installation of, or test, a special fire service under section 74 of the *Building Act 1975*.

The QFRS may decide, upon receiving a notice, whether or not to inspect the building work, or inspect or test the special fire service, to check the referral agency aspects comply with the building development approval.

If the QFRS decides not to inspect the building work, or inspect or test the special fire service, they must notify their decision to the builder and building certifier within five business days after receiving the notice.

If the QFRS decides to inspect the work, or inspect or test the service, then within 15 business days after receiving the notice under section 39, the QFRS must:

- conduct the inspection or test the work; and
- give the builder and the building certifier a notice stating the referral agency aspects comply with the building development approval or do not comply with the approval and the reasons why.

Section 40 of the *Building Regulation 2006* provides that a building certifier must accept and act on the notice given by the QFRS about the testing and inspection of aspects relating to their assessment advice unless the building certifier decides to disagree with the decision in the notice.

In this situation, the building certifier must, within five business days after receiving the notice, give the referral agency an information notice about the decision.

QFRS may appeal against the decision of the building certifier to a building and development dispute resolution committee. An appeal must be started within 20 business days after being given the building certifier's notice of the decision (refer to section 532 of the *Sustainable Planning Act 2009*).

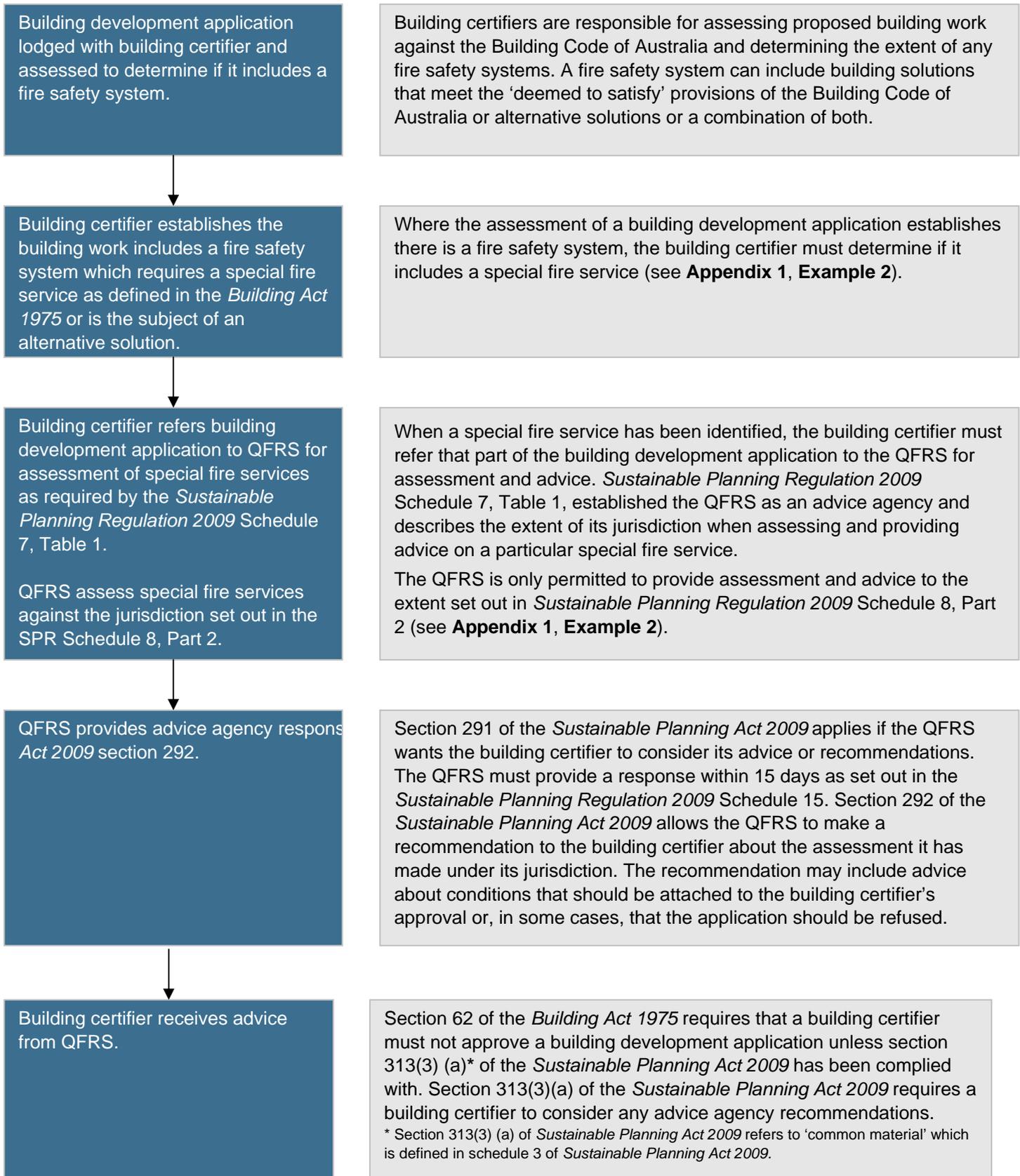
Legislative requirements and the referral process

Under the provisions of the *Building Act 1975* all building work is assessable unless it is exempt or self-assessable. Therefore, all assessable building work must comply with the building assessment provisions of the *Building Act 1975*, which include the Building Codes Australia.

As discussed above, the *Sustainable Planning Act 2009* requires certain aspects of some building development applications to be referred to advice agencies for assessment and response. Where a building development application for building work involves fire safety systems that include a special fire service, it must be referred to the QFRS for advice.

Diagram 1 explains the process of referral to the QFRS for building work that involves a fire safety system containing special fire services.

Diagram 1



Advice agency appeal process

The QFRS, as an advice agency, has the ability to appeal at two stages throughout the building development approval process. The first stage is after the building certifier has issued a decision notice and provided it to the QFRS. The second stage is after the QFRS has received an information notice from a building certifier stating that he or she does not agree with the inspection advice about special fire services.

Decision stage

If a building development application includes a special fire service or is the subject of an alternative solution the QFRS, upon referral, must provide advice to the building certifier. Section 62 of the *Building Act 1975* requires the building certifier to consider advice from a referral agency.

Section 334 of the *Sustainable Planning Act 2009* requires a building certifier to provide the QFRS with a copy of the decision notice for a building development approval within five business days after the day the decision was made.

Under section 528 of *Sustainable Planning Act 2009* the QFRS can appeal decisions to a building and development committee about the giving of the development approval if the development application involves special fire services and alternative solutions. The appeal must be started within 10 business days after the decision notice or negotiated decision notice is given to QFRS by the building certifier.

Inspection stage

The provisions in the *Building Regulation 2006* in Part 6, Division 2 set out the inspection process for the QFRS as a referral agency.

Section 40 of the *Building Regulation 2006* requires a building certifier to accept and act on a notice given by the QFRS about an inspection of special fire services. However, a building certifier may not agree with the inspection advice provided by the QFRS. In this case, the building certifier is required to give the QFRS an information notice about the decision within five days after receiving the advice.

Section 532 of the *Sustainable Planning Act 2009* allows the QFRS to appeal to a building and development committee about the decision not to agree with the inspection advice. The QFRS has 20 business days to start an appeal to a building and development committee after the day they are given notice of the decision.

Appendix 1

Example 1

A building development application is made for the proposed construction of a multi-level residential building less than 25 metres in effective height and containing several units. There is one central fire-isolated stairway serving as the only required fire exit. The distance from the entrance doors to some of the units exceeds the maximum six metres to the fire exit as set out under the provisions of Part D of the Building Code of Australia.

An alternative solution is formulated to address the travel distance in excess of six metres to the fire exit. As part of the alternative solution, an increase in the number of smoke detectors to the path of travel to the fire exit is incorporated. Further to this, quick response sprinklers are used as part of the solution to enhance the evacuation strategy for occupants.

Prescribing the maximum distance occupants have to travel to reach an exit and enhancing other fire safety systems is a method used in a building to provide for the safe evacuation of occupants. Therefore, the alternative solution, including extended travel distances, falls within the definition of a fire safety system and must be referred to the QFRS for advice.

The advice QFRS provides relates only to the elements of the alternative solution for the fire safety system. This will include the special fire services and the evacuation route that includes the continuous path of travel from within the residential unit to a place of safety.

In this example the special fire services referred to the QFRS for assessment and advice include the sprinkler, stairwell pressurisation and fire detection and alarm systems. These systems are identified in the *Sustainable Planning Regulation 2009*, Schedule 8, Part 1, (items 5, 13 and 14).

In summary, section 292 of the *Sustainable Planning Regulation 2009* states an advice agency may, within the limits of the advice agency's jurisdiction, make recommendations to a building certifier about any aspect of special fire services in an application. *Sustainable Planning Regulation 2009*, Schedule 8, Part 2, sets out precisely the referral jurisdiction of the QFRS as an advice agency. Therefore, it is important to note section 292 of *Sustainable Planning Regulation 2009* clarifies that the advice agency can provide recommendations, but they must be within the advice agency's jurisdiction.

In the above example, the matters QFRS may make recommendations about to the fire detection and alarm system including the achievement of specified performance of the system, location and operation of main fire indicator panels, suitability of nominated types of detection in all areas and the location of manual call points.

Similarly, for the sprinkler system, the QFRS may make recommendations about specific matters. These include the operation of a direct fire service alarm and location of directional signs and valve rooms, operation of pump-set controls and the location of valve rooms, pump-sets, water alarms and booster points. In this case, the advice agency's jurisdiction does not extend to matters such as the location of sprinkler heads, size and location of primary and range pipes and integrated substrates for wall wetting configurations.

For stairwell pressurisation systems, the advice agency's jurisdiction includes recommendations about achievement of the performance of the system, suitability of detector operation of stairwell pressurisation and the suitability of operational controls.

Example 2

A building development approval is made for the proposed construction of a multi-level residential building and basement carpark. The residential portion of the building will contain fire-isolated stairs that are required to be pressurised. The paths of travel to the exits from each floor level comply with the maximum travel distances set out in the Building Code Australia.

The building certifier for the project has identified the paths of travel to the fire-isolated stairs and the stairs themselves to be part of a method to provide safe evacuation. In addition, the building contains fire detection and alarm systems, emergency lighting and exit signs and a sprinkler system throughout.

The building certifier has established that these elements combine to warn people of an emergency and provide for safe evacuation. The building certifier's assessment confirms these to be a fire safety system as defined in the Building Code Australia. The building certifier further considers the sprinkler, stairwell pressurisation and fire detection and alarm systems (as sub-categories of the fire safety system) are special fire services according to the definition in the *Building Act 1975*.

The paths of travel and stair construction, while forming part of the fire safety system, meet the 'deemed to satisfy' provisions of the Building Code Australia and are not considered by the building certifier to be special fire services. Therefore the only matters referred to the QFRS for assessment and advice relates to the sprinkler, stairwell pressurisation and fire detection and alarm systems.