July 2014

Information for councils, certifiers and industry about approval information, documentation and inspection of sprinkler systems

1. PURPOSE

This Advisory Note, developed for councils and certifiers, outlines:

i) the information and documentation which must accompany a complying development certificate or construction certificate application for sprinkler systems in aged care buildings,

ii) requirements for fire safety schedules,

iii) the items that should be inspected,

iv) the tests that should be undertaken and,

v) the documentation that should accompany an occupation certificate application.

This Advisory Note supplements the earlier Advisory Note to councils, certifiers and industry (titled “Information for councils, certifiers and industry on the new fire sprinkler requirements” and dated April 2013).

2. INFORMATION AND DOCUMENTATION REQUIRED AT APPLICATION STAGE

Approval of a sprinkler system installation in an aged care facility can be approved via a development consent and construction certificate or a complying development certificate.

Both of these approval pathways require this submission of supporting information and documentation.

Statutory provisions for documentation

Clause 139(1)(a) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) provides that a construction certificate application must contain the information specified in Part 3 of Schedule 1 and must be accompanied by documentation that is specified in the same clause.

Clause 126(1)(a) of the EP&A Regulation provides that a complying development certificate application must contain the information specified in Part 2 of Schedule 1, and be accompanied by the documentation that is specified in the same clause.

In summary, clause 186R of the EP&A Regulation provides that a complying development certificate or construction certificate application for a sprinkler system installation must be accompanied by:

a) building plans that show:

(i) the location of the key components of the system (including sprinkler heads, valves, pumps, boosters and test connections) and associated alarm signalling equipment,

(ii) the layout of the pipework associated with the system, and

(iii) any other required building work (including fire separation works),

(b) the specifications of:

(i) the sprinkler system to be installed (including the flow and pressure of the water supply), and

(ii) any other required building work.

Note: It is suggested the plans which accompany the complying development

certificate or construction certificate application detail the floor area of the building as well as the fire and smoke compartments within the building.

Who prepares the documentation?

The documentation accompanying any complying development or construction certificate application should be prepared by suitably experienced designers. A separate Advisory Note has been drafted for aged care providers outlining the factors to consider when engaging a sprinkler system designer and installer (titled "the design and installation of fire sprinkler systems in aged care facilities" dated June 2014).

In order to approve any construction certificate or complying development certificate application, the certifying authority must be satisfied that the design complies with the Department of Planning & Environment's Fire Sprinkler Standard, the Building Code of Australia (BCA) and relevant Australian Standards. A certifying authority may request additional information and or documentation to be so satisfied.

A non-compliant design, or a design that is insufficiently detailed, has the potential to result in a non-compliant sprinkler system installation.

3. FIRE SAFETY SCHEDULES

There are a number of requirements that need to be addressed prior to an approval of a sprinkler system installation in an aged care facility.

Clause 166 of the EP&A Regulation lists the statutory fire safety measures.

Clause 168(1) of the EP&A Regulation provides that a fire safety schedule is issued when:

(a) a development consent is granted for a change of building use (other than a complying development certificate) in circumstances in which no building work is proposed by the applicant for the consent and no building work is required by the consent authority, or

(b) a complying development certificate for the erection of a building or for a change of building use is being issued, or

(c) a construction certificate for proposed building work is being issued, or

(d) a fire safety order in relation to building premises is being provided.

Standards of performance

It is critical that the correct standards of performance, including the Fire Sprinkler Standard, are referenced on the fire safety schedule which is issued for the sprinkler system installation. For example, where a sprinkler system is to be installed in an existing building and involves an AS 2118.6 – 1995: Combined sprinkler and hydrant system, the referenced standards in the fire safety schedule would include:

i) Fire Sprinkler Standard dated December 2013;

ii) AS 2118.6 – 1995.

Other building works specifically associated with the installation of the sprinkler system and required by operation of the Fire Sprinkler Standard (for example, fire resisting construction) should also be separately listed in the fire safety schedule together with the relevant location of these works and standard of performance. These elements may not otherwise be required by the BCA. Accordingly, unless they are specifically listed in the fire safety schedule for ongoing inspection and certification, it is possible these measures may be unknowingly removed or compromised at a later date.

4. INSPECTION OF A SPRINKLER SYSTEM INSTALLATION

When assessing the adequacy of a sprinkler system installation it is critical to ensure that the

installed system complies with the approved design. Where there is any variation between the design and the installed system, the designer should be consulted regarding the variations and requested to endorse the variations if appropriate.

Some of the items that should typically be inspected in relation to sprinkler system installations include:

- The type of sprinkler heads.
- The layout of the sprinkler heads.
- The position of the sprinkler heads in relation to obstructions.
- The position of the sprinkler heads in concealed spaces and voids (i.e. roof voids, ceiling voids).
- The type and installation of pipework in accordance with the design standard and relevant data sheets.
- The protection of service penetrations that have arisen as a result of the sprinkler installation works, to ensure the integrity of any fire rated and smoke proof elements, incipient spread ceilings and fire protective coverings are maintained.
- The pump, tank and booster installations, including signage, anti-tamper devices and infrastructure compliance.
- Ensure connection to monitoring provider and connection of existing occupant warning systems.
- The compatibility of existing and new systems including sprinkler head types.
- The correct referencing of standards of performance on block plans and valve set instructions.
- The fire and smoke separation between sprinkler protected and non-sprinkler protected parts of the building.
- Systems relying on shared infrastructure with other fire services operate to required design parameters under simultaneous operation of services. For example, where the hydrant and sprinkler systems share a water supply they must achieve compliant flows and pressures while operating simultaneously.

The above list is not exhaustive and other items may also require inspection prior to the issue of an occupation certificate.

5. COMMISSIONING TESTS AND OCCUPATION CERTIFICATE APPLICATIONS

The department's Fire Sprinkler Standard refers to a number of Australian Standards. These include AS 2118.4 and AS 2118.6 which relate specifically to sprinkler systems. These Australian Standards require that the sprinkler system installation be subject to a commissioning test. This commissioning test should be undertaken by an appropriately experienced person prior to the issue of an occupation certificate. This could include, for example, the person who designed the system. The purpose of a commissioning test is to ensure the sprinkler system operates in accordance with the approved design. It has also been suggested that the accredited certifier witness the commissioning test.

A final occupation certificate will still be required for the sprinkler system. Clause 149 of the EP&A Regulation details the information and documentation required to be provided as part of any occupation certificate application.

In addition, it is recommended that the principal certifying authority require the installer of the sprinkler system to provide a completion certificate. A template completion certificate is provided as an appendix to both AS 2118.4 – 1995 and AS 2118.4 – 2012. This completion certificate could be used as a model for any AS 2118.1– 1999 and AS 2118.6 sprinkler system installation.

6. FURTHER INFORMATION

For more information on fire sprinklers installation in aged care facilities you can:

- go online to www.planning.nsw.gov.au/buildinginnsw/safetycampaigns.aspx
- call the department on (02) 8575 4068