

Fire Safety & Security services in the NSW Building Industry: Legal context and application

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The planning system in New South Wales (NSW) includes building regulation and certification. A key part of this is sustainable development and ensuring that buildings are safe and meet all the performance expectations, both at the time of construction and throughout their effective life cycle.

The legal instrument which specifies the types of approval required in NSW is the Environmental Planning and Assessment Act 1979 (EP&A 1979). This includes that the building development complies with the relevant requirements of the Building Code of Australia (BCA), which forms part of the National Construction Code (NCC), as shown in Figure 1.

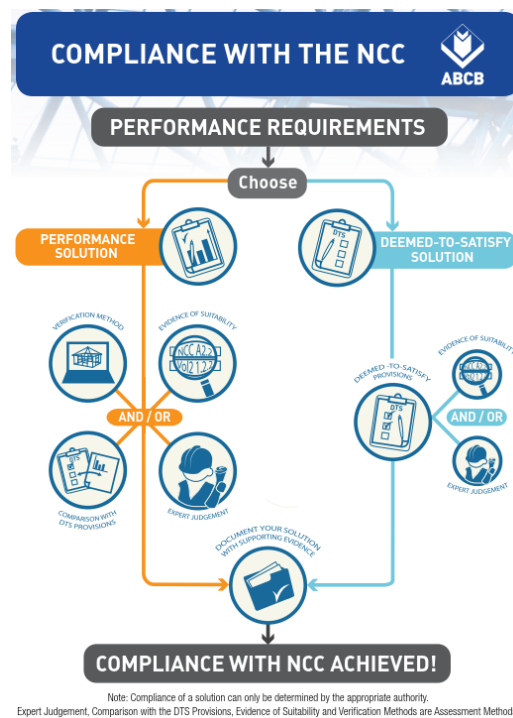


Figure 1. NCC Compliance (<http://www.abcb.gov.au/>)

Fire Safety and Security fall under the purview of the EP&A 1979. The following sections will examine Fire Safety and Security in New South Wales and the applicability of legislation and regulation as well as the application to the building industry within each area.

Fire Safety

Regulatory framework

Specific regulation with regard to Fire Safety is provided for in Environmental Planning and Assessment Regulation 2000 (EP&A Reg 2000) where Clause 144 details the requirement to refer plans and specifications to Fire and Rescue NSW (FRNSW) for a Performance Solution Report (PSR) for fire safety under the BCA in respect of the requirements set out in EP1.4, EP2.1, EP2.2, DP4 and DP5 for certain developments. The report is required to correctly identify both the performance requirements and the deemed-to-satisfy provisions of the Building Code of Australia. Additionally, it is required that "the plans show, and the specification describe, the physical elements of the performance solution (where they are capable of being shown and described)." Additional Fire safety matters are provisioned in Part 9 of the EP&A Reg 2000.

Referral authority: FRNSW

Since 2001, FRNSW has been charged under EP&A Reg to assess and provide a report on the performance solution and the performance requirements it is intended to meet. Under these provisions, for specified classes of buildings, a Certifier, upon receipt of an application for Construction Certificate (CC), must refer the plans and specifications to FRNSW, including a PSR, which is subsequently forwarded to the Fire Commissioner. Following its assessment and subject to approval, FRNSW will issue an Initial Fire Safety Report (IFSR).

Upon receipt of an application for an Occupation Certificate (OC), the principal certifier must request a Final Fire Safety Report (FFSR) from FRNSW. The application for the FFSR must include a compliance certificate or written report by a fire safety engineer stating that the building work relating to the performance solution has been completed and complies with the solution in the PSR.

Fire Engineering Process

In practice, Fire Safety Engineering begins in the planning stages where the Fire Engineer prepares a Fire Engineering Concept Design Study (FECDS) that outlines the deemed to satisfy and performance solutions for the Planner to consider in their pre-DA considerations. Following the Development Approval (DA), the Fire Engineer engages with the certifier and architects to arrive at a Fire Engineering Brief Questionnaire (FEBQ) and Fire Engineering Brief (FEB). The FEB comprises an outline of the fire safety strategy and design for the proposed development. It occurs within the preliminary design phase with the intent of allowing stakeholder feedback, particularly from the certifying authority, into the assessment methods and acceptance criteria that will be used in the performance solution. The National Construction Code refers to the FEB in Schedule 7 as the Performance-based design brief.

The FEB is the precursor to the design stage activity where the Fire Engineer prepares the Fire Engineering Report (FER), which is the same as the PSR described above. Computational Fluid Dynamics (CFD) modelling is sometimes employed along with other supporting calculations and test reports to justify the performance solution. These are the inputs to the certifying authority prior to the issue of the IFSR.

The final stage of the Fire Engineering process is the inspection stage that includes the preparation of a report called the Fire Engineering Inspection Report (FEIR) that is the written report submitted to the certifying authority for the issue of the FFSR. A diagrammatic representation of this process is presented in Figure 2.

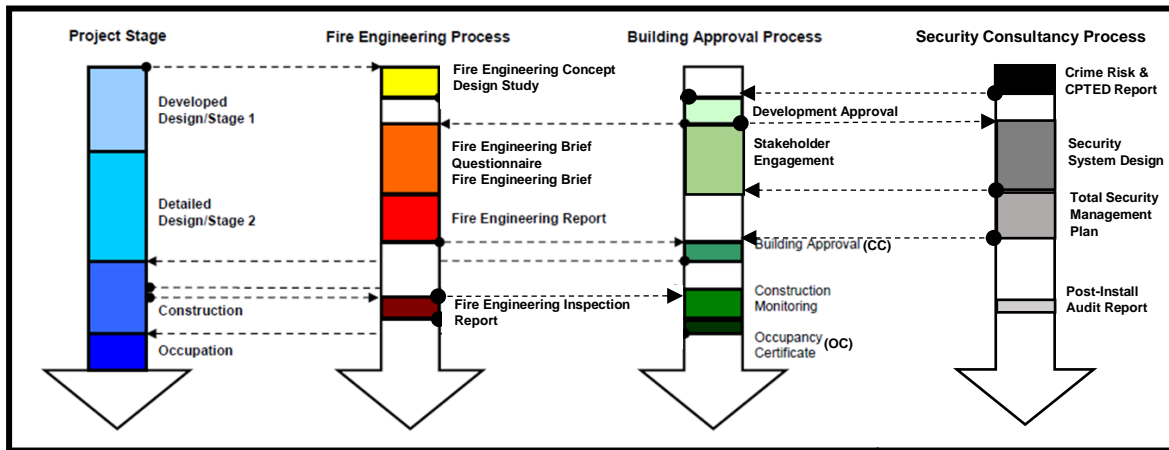


Figure 2. Fire Engineering and Security Consultancy within the Project and Building Approvals Process

Security

Crime Prevention in the Assessment of Development Applications

In assessing any development application, the consent authority, generally Councils in NSW, must consider the application under Section 4.15 (formerly Section 79C) of the EPA Act 1979. Included within Section 4.15, the consent authority must consider:

- The likely impacts of the development, including the environmental impacts on the natural and build environments, and social and economic impacts on the locality,
- The public interest.

Crime prevention falls under these considerations of Section 4.15, as per the introduction of 'Crime Prevention and the Assessment of Development Applications: Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979', by the NSW Department of Infrastructure, Planning and Natural Resources (formerly Department of Urban Affairs and Planning) in April 2001.

'Councils have an obligation to ensure that a development provides safety and security to users and the community. If a development presents a crime risk, these guidelines can be used to justify:

- modification of the development to minimise the risk of crime, or
- refusal of the development on the grounds that crime risk cannot be appropriately minimised.'

(Crime Prevention and the Assessment of Development Applications: Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979)

‘A formal crime risk assessment is needed for any development that is likely (in the council’s opinion) to create a risk of crime.’

(Crime Prevention and the Assessment of Development Applications: Guidelines under Section 79C of the Environmental Planning and Assessment Act 1979)

Security Consultancy Process

The security consultancy process, outlined in Figure 2, enables a developer to comply with these requirements and prepare a Crime Risk and CPTED Report early in the building approvals process. Security and CPTED are also prescribed as requirements within several NSW Council Development Control Plans (DCPs). Early engagement and preparation of a customised crime risk assessment and CPTED mark-up of the architectural plans yields not just compliance when preparing Development Applications, but also provides design stage security inputs to planners, architects, project managers and electrical services consultants. These also form the basis for stakeholder engagement, which can include the NSW Police, Council, and the end-clients. The process of stakeholder engagement can be through interviews, report reviews and stakeholder security workshops.

Security systems that are designed in this way utilise a risk managed approach to reducing crime and implementing mitigation measures, rather than merely considering electronic access control systems and video surveillance as the sole components of security. Adopting a risk managed approach to security takes a more holistic approach, where alterations in design such as: elimination of hidden corners, the inclusion of planter boxes, improvement in visual sightlines, or the use of pedestrian level lighting can more effectively impact security outcomes than expensive after measures. By incorporating a risk-based approach to security management, a strategy for the ongoing management of security can be incorporated into an instrument such as the Total Security Management Plan. This acknowledges the ongoing cost of managing security to allow this to be factored into budgets early in the piece from an operational perspective.

The final step in the security process is the preparation of a post-installation audit report, that seeks to capture the state of security at the completion of the construction and provides the asset owners and operators with a complete picture of the residual risks that have to be managed into the future.